

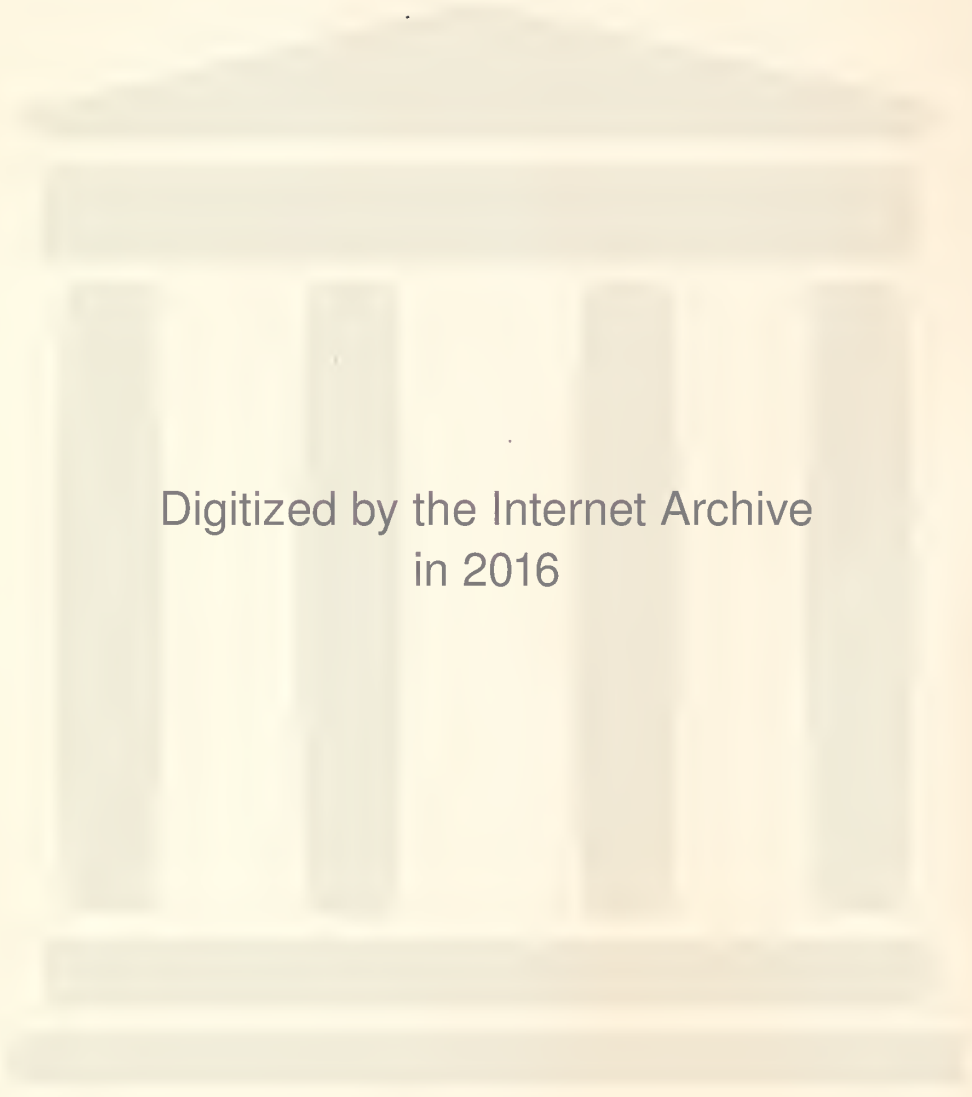
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THE ATLANTIC MEDICAL JOURNAL

OCTOBER, 1926—SEPTEMBER, 1927

REPRESENTING

THE TRANSACTIONS OF THE MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA

AT ITS ANNUAL SESSION HELD AT

PHILADELPHIA, PA., OCTOBER, 1926

AND

THE TRANSACTIONS OF THE MEDICAL SOCIETY OF DELAWARE

AT ITS ANNUAL SESSION HELD AT

DOVER, DELAWARE, OCTOBER, 1926

VOLUME LVI

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MEDICINE AND STATE*

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SCRANTON, PA.

By decree of the Constitution and By-Laws of this Society and a well-established custom it is imperative that I inflict upon you, at this time, an inaugural address. Realizing this fact in advance, I have taken the privilege of reviewing the efforts of my predecessors that I might conform to past customs and yet bring upon this occasion for your consideration such messages as may be of utmost importance pertaining to the advancement of medical organization in this State and the ultimate good it may have in matters of public health. Many of these presidential addresses have dealt with matters of organization, education, and legislation, and since we seem not to have reached the ideal in any of these very important phases of our existence, I may be pardoned if I, too, endeavor to spur you on toward the acme of accomplishment in some of these things, and thus lighten the load of those who follow us, and who, like ourselves, would strive to make the world better for having lived in it.

Organization of this Society was effected seventy-eight years ago, under most adverse circumstances. Modes of travel were slow and tedious, the possibilities of communication were even slower, the financial status of the average practitioner of medicine was at a very low ebb, and it is little wonder that such a small proportion of the profession generally was represented at the annual meetings for many years. The records show that the second meeting was held in the city of Philadelphia, and it has been the good fortune of this Society to have been the guest of our host, the Philadelphia County Medical Society, many times since. While this city is often referred to as the cradle of American liberty, it is also the cradle of American medicine. The first hospital, the first college providing regular courses of lectures leading to the degree of Doctor of Medicine, and the first library including only periodicals devoted to scientific medicine in its collection were among the institutions of this city marking a step toward our present accomplishments in medical science. We as Pennsylvanians should have a just pride in the fact that from these historic institutions sprang others that have sent forth into the world some of the master minds of our profession.

In 1876, when the whole world joined with this community in celebrating the Centennial of American independence, our Society held its annual meeting here, and it is with much pleasure that we again assemble upon the occasion of the Sesqui-Centennial. At the present celebration, every avenue of art and science is marked by the steady progress of the ingenuity of man, and it is without fear of contradiction that I say to you to-day the medical profession has kept faith with the public, and our progress is equal, if not superior, to the advances made in other lines of endeavor.

Organization is a combination of efforts along similar lines resulting in mutual good, and our Society more fully meets these requirements than any other with which I am familiar. The object for which we strive—the eradication of disease and suffering among humanity—depends wholly upon the coöperation within our ranks, as well as that of the public at large.

It is an idle thought to suppose that every medical man within this Commonwealth might be brought within the pale of organization, but it is equally certain that our position is annually becoming more enviable, and that those who profess to care little or not at all for our Society feel themselves ostracized. We are happy to relate that the total number in this class is extremely small and insignificant, and that the efforts to make membership in our association more attractive have influenced and will continue to influence certain individuals favorably.

Our Society was founded with the single motive of public benefaction; viz., the admission to its membership only of physicians known to be honorable practitioners, adequately educated and trained to treat the ills of their fellow men, and although we are frequently accused of ulterior motives by those striving to commercialize the

*Presidential address, delivered before the General Meeting of the Medical Society of the State of Pennsylvania, Philadelphia Session, October 12, 1926.

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profession, lay education will eventually correct this impression in the public mind.

I believe this misapprehension to be sufficiently deep-rooted throughout our State to justify a campaign of enlightenment as to the motives, aims, and ambitions of the medical fraternity. Other state societies have and are now carrying on such campaigns, notably Illinois, and I am informed that much favorable opinion is being created thereby. This recommendation is made with a full realization of the care with which such a campaign should be conducted and the many pitfalls and entanglements which would of necessity need to be overcome. Nevertheless, I ask, if others can do it why cannot we?

A new factor of considerable promise in the ultimate consummation of our hopes and ambitions is afforded in the advent of the Woman's Auxiliary to our Society and its component societies. The wives, daughters, mothers, and sisters of members of our profession can by their affiliation with civic and social organizations in their respective communities aid in the campaign of education of the public regarding public health and public-health legislation.

A knowledge of the history and aims of the Auxiliary will recommend it as an agency of much value to our cause and worthy of support and encouragement.

Of matters concerning organization and organization activities we can learn much from neighboring state societies, and with this idea in mind and the hope that other difficulties which have from time to time arisen might be the more easily smoothed out, representatives from the States of New York, New Jersey, and Pennsylvania were invited to assemble in Atlantic City some time ago and discuss such problems as then seemed of sufficient importance to merit mutual consideration. Our Society was represented by some of its officers and others interested in the subjects decided upon for discussion upon that occasion, as were the other States.

More recently a meeting of the same character was held in Philadelphia, at which such subjects of vital importance to the organized profession of the three States were discussed as "Postgraduate Medical Education," "The Workmen's Compensation Act," and "How Can We Make the Medical Practice Acts More Uniform?" Each subject was ably presented, and elicited keen discussion from those present.

At the latter meeting the nucleus of a permanent organization was formed, and I believe there are enough interests in common to commend this movement to the serious consideration of our Society. With such an end in view, I would suggest that some official recognition be given the work, and that such officers as the president, president-elect, secretary, editor, and chairman of the Board of Trustees during their tenure of office be made permanent representatives in the Tristate Conference, with the understanding that they may at any time call upon others to present such matters before this body for discussion as may be agreed upon by the members of the Conference.

Our current periodical, the Atlantic Medical Journal, embodying as it does, the activities of our Society and those of the Medical Society of Delaware, is without a peer among the state medical publications in this country, and its pages should be closely and carefully scanned by every member of this Society, that he may keep himself well informed of the organization's activities, and find, as well, much of scientific value in the published papers of contributors. It is to be hoped that in time other states on our borders will join with us in the publication of this journal, thereby increasing its scope, influence, and income. Should the opportunity arise, we are strategically equipped, with our permanent home in Harrisburg, to accomplish such aims and objects.

The progress of any organization may, in a measure, be judged by its financial development, and if we are to be so judged, it is with gratification we note the past ten years to have been the most successful of our career. Having spent several years as chairman of the finance committee of the Board of Trustees, I am convinced that our ultimate success must depend, in a measure, upon the gradual accumulation of such funds as will best meet the needs of the future.

Our Endowment Fund is not yet large, but a beginning has been made. While we hoped at first only for a fund sufficiently large to finance the annual meetings, we now must consider also the possibilities that are ours to develop should a coalition of the various state publications be consummated.

It seems but yesterday that we started the Medical Defense Fund, but by constant endeavor, we have now reached a point where it is no longer necessary to make an allotment to it from our annual assessment, and this money may well be diverted to other deserving channels. What a wonderful asset this fund has been to our organization! Coming as it did at a time when suits for alleged malpractice were so prevalent that none was without danger of being summoned to court, this fund and its influence has very much decreased the number of such suits.

There is yet one other fund to which I would call especial attention—the Medical Benevolence

Fund. Physicians generally are so accustomed to serving others that they rarely think of their own or their dependents' future, and while the early transactions of our organization show that some thought was given to the establishment of a benevolence fund, yet little of a substantial nature was accomplished until within the last few years. This fund has now reached approximately $25,000, yielding an income from investments of about $1,000 annually, which at the present time is being distributed among three beneficiaries. Unlike the other funds, it has no accumulative power, for its earnings must be distributed to those who need its help, and the little assistance it gives is entirely inadequate for the sustenance of even one individual. I regret extremely that this is true, and urge each of you to contribute toward the accumulation of an adequate endowment. A blank for the purpose is inserted elsewhere in this number of the Journal, and even though small, your contribution will be welcomed and you will have helped to build an everlasting monument not only to yourself, but to the organization which we are all striving to make successful.

The foregoing represent a few of the many activities of our organization, and as we have yet to consider education and legislation, I must hasten on and leave the less important matters for your respective councilors and the Journal to bring to your attention.

The fitness of those engaged in, and the educational qualifications of those about to enter upon the study of the science of medicine was the first subject discussed after permanent organization of this Society was accomplished at its initial meeting, and has held the attention of this and other medical associations throughout the land these many years.

To-day, we can scarcely question the fitness of those legally licensed to practice medicine, for laws enacted forty years ago have from time to time been strengthened, and the public, whom we would serve, is yearly coming to a realization that the uneducated physician is an unsafe anchor upon which to rely in the storm of illness. True, cults have arisen that endeavor to heal the sick, either in mind or body but more particularly in mind, without recourse to scientific methods, and since most of these have had no foundation of a scientific nature and are but the commercial exploitations of grasping individuals, they have either waned or failed in their endeavors to meet scientific standards.

Our aim and effort for those within our ranks to-day must be to keep informed as to the progress of science. Postgraduate study, at home or in distant cities, is essential for those who would keep pace with the onward march of progress. Attendance upon the sessions of the county medical society is most essential, for nothing except more extended postgraduate work offers equal opportunity to review the rapid strides in scientific medicine.

It is to be hoped that the near future will make it possible in some way to have extension postgraduate courses in every component county medical society in this State, and that the members of the profession generally will avail themselves of this opportunity when it is afforded. There is yet one great remaining obstacle to the realization of this important measure; viz., the closed hospitals so numerous throughout our Commonwealth.

For the healthy progress of the medical profession generally throughout the land, the time must speedily arrive when all institutions, with the exception of those directly associated with a school of medicine, professing to care for the ill or injured must throw open their doors to the reputable practitioner of medicine and make him welcome to the wards and private rooms for the treatment of the patient who prefers the services of his own physician rather than a member of the staff on duty. Hospitals were created primarily for the benefit of suffering humanity, and since their maintenance is so generally a matter of public contribution, because of the ever-increasing cost of keeping up the high standards set by a discriminating public, the prospective patient should be entitled at least to select his attending physician.

Another phase of this problem is the education of the young physician. The State, having contributed a large share toward his education, specifying and regulating the conditions under which he must work, then sending him forth to heal the sick, and yet in many communities denying him the use of publicly supported institutions as his aid in attaining the best results in the practice of the profession for which he has been trained, has failed thereby in its duty toward the public. Many of our institutions have already opened their wards and private rooms to reputable physicians, and I hope some concerted movement on the part of our organization tending toward inducing others to do so will speedily be taken up.

Since the great World War, and particularly during that period of readjustment which follows all such catastrophes, we have heard much about the inequality in the distribution of physicians, and the statement has repeatedly been made that rural communities have been left without adequate medical protection. Personally, I have always felt that this problem would adjust

itself, and to the ultimate good of the profession and the public.

At the beginning of the World War, many a physician who had practiced in the country enlisted in the service, first because of his patriotic spirit, and second with the hope that something would happen to relieve him of the dull monotony and isolation from those who could give him inspiration for his work, and that he might eventually find a location where the remuneration would be greater and the grind less irksome—and in not a few instances this very thing has happened. The grim reaper has removed many of the older members of the profession who for years so valiantly served their respective rural communities, and this coupled with the loss of those locating elsewhere after the war, has for a time somewhat crippled rural medical service. However, many of the young men entering practice to-day are again seeking places in the country, are receiving compensation commensurate with the service they are equipped to render, and eventually both the doctor and the community will be benefited.

The educational requirements for those about to enter upon the study of medicine have for many years been the subject of discussion both in and outside of our profession. Like all great reforms, the present high standard did not come by leaps and bounds, but by the gradual education of the public regarding the necessity for higher standards. Our present requirements are not meant to be a barrier to the youth who is ambitious to enter the profession, but rather to fit him better for that exercise of judgment and sound reasoning which will be his daily need in the years to follow. When it is found possible for the educators of this State to provide a higher educational standard in our high schools, the time now spent away from home by the student may be reduced, and either no college work or, at least, less of it will be required, thereby materially lessening the cost of education in medicine. Under no circumstances, however, should the preliminary educational requirements be lowered with the single purpose of turning out more physicians, who would of necessity be inferior in grade and less capable than those of the present day.

Since the advent of our organization, we have maintained as one of our first ambitions the higher moral and educational standards of medical men and women, with the single purpose in mind of better service to the public, and it is but natural that we should hope for coöperation from the people. All past efforts tending toward legislation governing our relations with the State have been notably free from anything that might be construed as tending toward self-preservation or arising from selfish motives, and in the future as in the past, our ambition must be directed toward the greatest good for the greatest number.

Among some of the outstanding legislation secured in Pennsylvania and sponsored by our organization is: proper housing, restraint, and care of the insane; the establishment of a state department of health; the enactment of proper laws governing communicable diseases; the development of a bureau of vital statistics; and the appointment of a board of medical education and licensure. Changing conditions in governmental affairs have repeatedly altered the method of conducting these various bureaus, and at present most of the affairs dealing directly or indirectly with matters of public health are more or less closely associated with the Department of Health. The high type of men who have headed this division of the State Government is significant of the importance with which it is regarded by the various executives who have selected them from among our ranks.

The Board of Medical Education and Licensure has for its function the determining of the fitness for entrance into the practice of medicine of all who claim to have had the required educational training. There has been for some time in this State, and still is to-day, a widespread disregard on the part of certain interests, for the laws placed upon the statute books which are supposed to be enforced by this Board, and regarding which it is frequently hinted that certain political interests have ordered a "hands-off" policy. If this be true, it is a disgrace to our great State. Certain it is that no concerted effort was made to prohibit uneducated, untrained, and unqualified individuals, designating themselves under one or more various meaningless appellations, from setting forth their claims to heal the sick and care for the injured. It was not until many useful lives had been sacrificed upon the altar of ignorance and neglect that some slight effort was made to control unlicensed cultists, and then not until the members of our profession, taxed under the Annual Registration Act, furnished funds with which to carry on the work. We now await the action of the Board of Medical Education and Licensure with no small anticipation of speedy and specific enforcement of laws which have been neglected by them in the past only because of lack of financial resources.

It has always appeared to me that a closer relationship should exist between the Board of Medical Education and Licensure and our organization, since it deals entirely with our future members and is the Commonwealth's official rep-

resentative responsible for the proper enforcement of the statutes governing our fitness and our conduct in the practice of medicine. During the past year somewhat more amicable relations have been established, and upon several occasions members of our Society have been called in conference for the discussion of ways and means for the improvement of professional standards. This spirit of coöperation should be fostered.

The public looks to us for guidance not only in questions of a medical nature, but also expects us to sponsor laws for public welfare, and although the people may not always follow our advice to the letter, yet they have a wholesome respect for our judgment.

That others following the same pursuits as ourselves should have sought and obtained legal recognition and a separate board to govern their activities is to be deplored, for all such matters are best regulated by one act and one board, and it is now our duty to draft such legislation as is necessary to give recognition to the cult that has already obtained legal standing, and to provide for any others that may hereafter be recognized. This task has been undertaken by a subcommittee of the Board of Trustees, and an amendment to the Medical Practice Act of the State of Pennsylvania has been drafted. If this proposed amendment meets with the approval of the House of Delegates at this session, it will be presented to the incoming Legislature, and a concerted effort should be made by the members of this Society in their respective districts to impress those who will represent them at Harrisburg next year with the importance of this measure.

I must warn you at this time that only by the organized effort of the entire medical profession of this State can we expect to overcome the opposition that has ever been and perhaps always will be present against any move toward legislative progress suggested by us.

There are yet many things necessary in a legislative way before we can hope to equal the standards of other States on our borders, but patience has been our virtue in the past, and if we can continue the progress that has been made by organized effort during the past few years and continue to grow in influence and take, as we must, our rightful place in the field of politics, success will eventually crown our efforts.

In closing I wish to thank you most sincerely for the distinction you have given me in elevating me to the highest office within your gift and to assure you that it will be my greatest pleasure to serve you. In the past I have endeavored to follow the path of duty, and if anything worthy of your consideration has been accomplished, it has been because of the whole-hearted coöperation of my colleagues on the Board of Trustees and of this membership. Your assistance will be more than ever necessary for our mutual success during the coming legislative year, which promises more of vital interest to us than any previous legislative year, and without doubt you will in every way coöperate with the various officers and committees to the end that the public health may be conserved.

I can but remind you, further, that our several paths lead to a common end, and that if we have made the best use of the talents given us we can find comfort in those immortal lines so beautifully penned by that illustrious son of a New England physician,

So live, that when thy summons comes to join
The innumerable caravan, that moves
To that mysterious realm, where each shall take
His chamber in the silent halls of death,
Thou go not, like the quarry slave at night,
Scourged to his dungeon, but, sustained and soothed
By an unfaltering trust, approach thy grave
Like one who wraps the drapery of his couch
About him, and lies down to pleasant dreams.

CHOLECYSTOGRAPHY: A ROUTINE PROCEDURE IN THE ROENTGEN-RAY EXAMINATION OF THE GASTRO-INTESTINAL TRACT*

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Cholecystography consists of an x-ray examination of the gall bladder after the administration of a substance which is excreted with bile, rendering the gall bladder opaque to the x-rays when the bile containing the substance enters this organ.

The oral method of administration of sodium tetraiodophenolphthalein has practically replaced the intravenous method as a routine procedure. The intravenous method is reserved and recommended for confirmation or for increased accuracy when the oral method fails to demonstrate the gall bladder. When the drug is given intravenously and the gall bladder fails to be shown, the evidence is almost pathognomonic of disease of the gall bladder. It seems, therefore, that if this method of study can be combined with the routine x-ray study of the gastro-intestinal tract, we shall obtain additional information. It is expensive and distressing to the patient to go through two or three separate studies of the gall bladder and gastro-intestinal tract in order to get an opinion. Therefore, for the sake of economy of time, money, and materials, we have tried,

*Read before the North End Medical Society, Philadelphia, Pa., February 25, 1926.

with success, to combine the oral administration of sodium tetraiodophenolphthalein with the routine gastro-intestinal study in all cases in which the gall bladder is a possible factor.

The visualization of the gall bladder by an opaque salt, sodium tetraiodophenolphthalein, was first described two years ago by Graham and Cole, and has since become an important procedure in the roentgen-ray study of this organ. The test is an application of the discovery by Abel and Rowntree that the liver secretes the hallogen compounds of phenolphthalein. The earlier works were fraught with uncertainties as to technic and diagnosis; but the enthusiasm and the experience of many clinics throughout the world have since massed together an abundance of detailed information, not only as to the reliability of its technical application, but its great possibilities in determining the function as well as pathology of the gall bladder by roentgen-ray examination.

At least ten salts have been shown experimentally by Graham to be applicable in cholecystography. The salts of tetrabromphenolphthalein and tetraiodophenolphthalein have thus far been the only ones of practical clinical value. Whitaker and Milliken have shown that the salt of sodium tetraiodophenolphthalein is of more general value because of its greater atomic weight, only half the dose of the bromine salt being necessary, and that the cholecystograms are more dense even with the smaller doses. The ratio of the opacity of the tetrabrom salt to the tetraiodo salt is approximately one to two, so that today the salt of sodium tetraiodophenolphthalein is the one in common use.

The principle of this examination depends upon the ability of the liver to excrete the salt; upon a patulous biliary tract, so that bile may flow unobstructed into the gall bladder; and upon concentrations of the bile, so that after a sufficient lapse of time the density of the gall bladder is adequate to cast an opaque shadow in the x-ray film varying in degree according to the amount of the salt absorbed. Rous and McMaster have demonstrated conclusively the concentrating activity of the gall bladder. The explanation of the processes taking place during the cycle in which the gall bladder is opaque to the roentgen ray after administration of sodium tetrabrom- or tetraiodophenolphthalein is based on the concentrating activity of that organ.

Cholecystography has opened many avenues of investigation in the study of the physiology and pathology of the gall bladder. The brilliant and masterly researches and investigations of Sweet and Halpert set forth the theory that the bile which enters the gall bladder never leaves it by way of the cystic duct, but largely by absorption through its wall. The former bases his contentions on the mechanical hindrances to the outflow of the bile and the known capacity of the gall bladder for concentration. Halpert maintains that this theory explains most of the pathologic conditions of the gall bladder, including the formation of calculi.

Copher has ligated the common bile duct in dogs after a shadow of the gall bladder had been produced by sodium tetrabromphenolphthalein, and found that the shadow was still visualized after several days when normally it disappears within thirty to forty hours at most. This demonstrated the very slow absorption process of substances like sodium tetrabromphenolphthalein. Conversely, Whitaker and Maddok first ligated the common bile duct and found only very faint shadows after the salt injections. These observations do not disprove the theories of gall-bladder-wall absorption, but throw new light on an activity and function of this organ that heretofore has not been clearly understood. Copher's experiments, therefore, indicate that the salt that



Fig. 1. General film showing the shadow of a normal liver, normal kidneys, and an outline of a normal gall bladder in an adult male, 43 years of age.

enters the gall bladder through the cystic duct passes out through the cystic duct.

The administration of the drug at first was by the intravenous route. While this procedure is simple and will show a larger percentage of normal gall-bladder outlines than the oral method, it is not so simple nor so convenient a pro-

cedure for routine work as the oral method. The accuracy of the intravenous method, judged by an absence of gall-bladder shadow, is about 95 per cent as compared with the oral administration, which has been only about 80 per cent. The only danger from the intravenous method is the possibility of a slough if there should be any leakage or subcutaneous extravasation.



Fig. 2. Local film of gall bladder made 14 hours after beginning the oral administration of sodium tetraiodophenolphthalein, showing a normal gall bladder.

The reactions have been variable but not serious. Headaches, nausea, vomiting, diarrhea, general malaise and sensations of feeling "all in" for a short time occur in some cases. There have scarcely ever been any constitutional symptoms lasting more than twenty-four hours.

Menees and Robinson were the first to report the successful use of this drug by mouth. Because of its irritating properties, the value of the examination in many instances was depreciated because much of the drug was lost in vomiting. Since absorption of this salt is chemically better in an alkaline medium, many investigators have made an effort to find a coating that would resist the acidity of the stomach and pass on to the small bowel where absorption in an alkaline medium might be more favorable. Menees and Robinson administered formaldehyd-treated capsules as an "enteric" coating, the salt having been made into a thin paste with olive oil before being put into the capsule.

Because of the convenience, simplicity, and relative reliability of absorption by the oral method we have experimented with various coated capsules and pills ranging from simple gelatin capsules, formaldehyd-treated capsules, salol, keratin and sugar-coated pills, with free alkalinization, but have learned that one preparation may be ideal for one case and not for another. The occurrence of cycles of acidity in various individuals is not a rhythmical controllable factor, and will vary with graded intensities according as it is influenced by food, emotions, or disease. On this account, we believe with Carmen that the general average of results will be as consistent and as uniform with oral administration in plain gelatin capsules as it will be if capsules and pills with specially prepared resistant coatings are used.

The reactions by the oral method have been nausea, vomiting, diarrhea, either one or all of these symptoms, but always of a very mild degree. If the vomiting occurs soon after taking the drug, then negative gall-bladder shadows must be so discounted.

Our experiences thus far indicate that it is a safe routine procedure in all cases. Sosman, Whitaker, and Edson have encountered no contraindications, and have successfully employed it in patients with jaundice, cirrhosis of the liver, hemachromatosis, chronic passive congestion, nephritis, hypertension, chronic myocarditis, angina pectoris, and brain tumors.

Cholecystography as a routine in the roentgen-ray examination of the gastro-intestinal tract

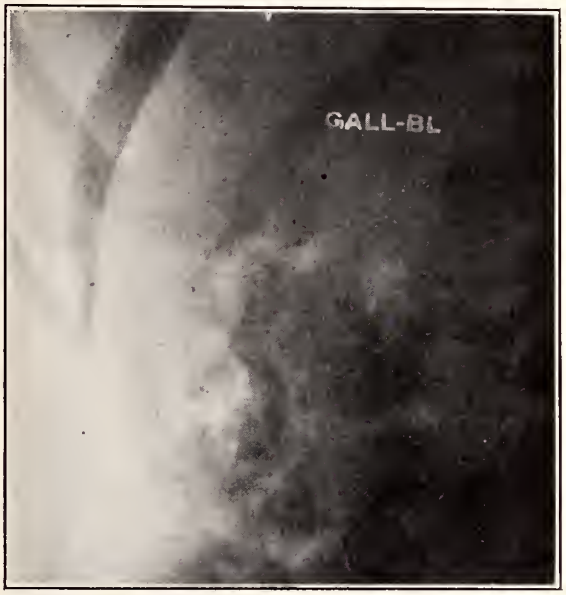


Fig. 3. Same case as figure 2, showing complete emptying of the gall bladder 3½ hours later, after taking a meal consisting of eggs, milk, and cream.

holds forth many diagnostic possibilities. The general economy in time and expense is greatly increased. The efficiency and reliability of the test is enhanced by the additional opportunity to weigh the indirect evidences of gall-bladder disease by the duodenal deformities and irregularities. Distortions and displacement effects are



Fig. 4. Showing a faint outline of a gall stone preceding the administration of the opaque salt, but not definitely diagnostic. This is located in the common duct.

readily accounted for if due to dilated coils of the intestine. The outline of the bowel by the unabsorbed salt serves to check and explain some negative gall-bladder shadows. The many variations in position of the gall bladder in relation to other parts of the gastro-intestinal tract can be demonstrated.

Roentgen-ray examinations of the gastro-intestinal tract are made either to locate or confirm clinical evidence of disease, its character, and its possible extent. In the majority of instances the symptoms are vague and atypical and may simulate genito-urinary calculi or disease, chronic appendicitis, cholecystitis, cholelithiasis, gastric and duodenal ulcer or carcinoma, or any number of other pathological processes. Very commonly some abnormal function or pathological condition is present in more than one organ. If these are determined as a whole, the clinician is in a better position to advise treatment and get the patient permanently well.

Gall stones may not be shown in the routine x-ray films, but after the tetraiodophenolphthalein visualization, mottled areas of rarefaction, due to the displacement of the volume of the gall-bladder content by the mass effect of gall stones, or even the gall stones themselves are occasionally demonstrated. Intensified ringlike



Fig. 6. Showing a "negative" gall-stone shadow in the gall bladder caused by the displacement effect on the tetraiodid. This can take place only when the stones are of a large size.

shadows are frequently observed, due to the absorption of the salt by the outer coating of the gall stones, which shadows are still further intensified and persist even when the gall bladder has emptied. Cholecystography is of immense value in differentiating gall stones from renal calculi.

The old anatomic conceptions of the shape and position of the stomach after many years of erroneous teaching were shattered by the roentgenologic visualization of this organ with barium sulphate. Its size, position, and contour; its functions and variations, physiologic and pathologic, opened a new area in the diagnosis of disease of the gastro-intestinal tract. Today, cholecystography enables us to visualize the gall bladder so clearly and so distinctly that we can now study its outline, size, position, and contour with an accuracy that is comparable only to the palpating finger of the surgeon. The variation

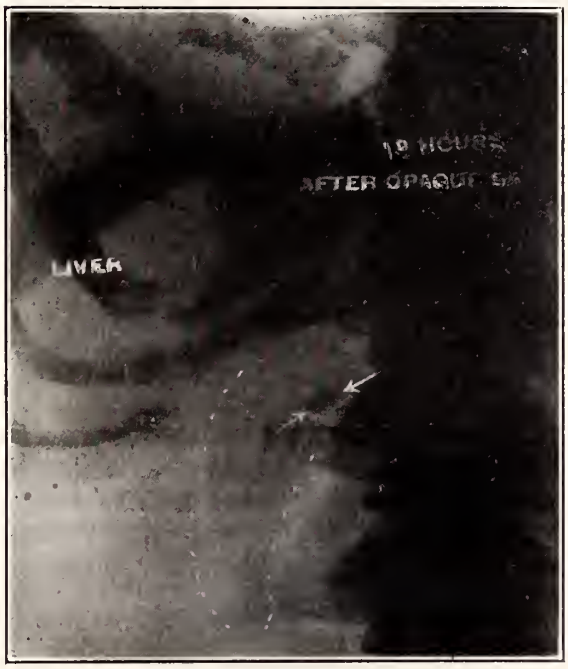


Fig. 5. Showing the gall-stone shadow (in relation to the gall bladder) much intensified by the opaque salt 12 hours after oral administration.



Fig. 7. Showing gall stones independent of tetraiodid in relation to the stomach, which is filled with a barium meal.

in position of the normal gall bladder is so frequent and so great that at first it was looked upon as an expression of disease, adhesions, or some abnormal function; but its occurrence in so many subjects has taught us the great diversity of aspects that the normal organ may assume. A normally functioning gall bladder may vary



Fig. 8. Shows the pressure effect of a large gall bladder upon the pyloric end of the stomach and the duodenum, which is sometimes found independent of tetraiodid and is one of the so-called indirect signs of gall-bladder disease.

several inches during the process of emptying. We have observed a pyriform-shaped gall bladder contract a few hours later and become an elongated fingerlike shadow with the distal end tilted upward and outward, and still a few hours later, with the patient in the same position, further shrinkage in size would take place, with the distal end tilted upward and inward. Such variation in size, shape, and position during the process of emptying is a frequent observation with other workers in this field.

A normal gall bladder should cast a homogenous shadow, regular in outline, at the end of twelve to fifteen hours by the oral method, and show progressive shrinkage in size which is evidence of the elasticity of its wall. If no gall-



Fig. 9. Showing the stomach and duodenum filled with barium meal and a distortion of the second portion of the duodenum, due to gall-bladder disease; also classed as indirect evidence of gall-bladder disease.

bladder shadow is visualized, or if the shadow is very faint, or if it persists longer than twenty to thirty hours, the gall bladder is probably abnormal.

If the examination of the alimentary canal shows nothing abnormal or insufficient to account for its symptoms, we believe the absence of a gall-bladder shadow (providing there have been no technical defects) should be regarded with importance, even by the oral method. Special care should be observed in getting a follow-up history as to whether the patient took all of the capsules, and how much and how soon after the

drug was taken it was vomited, so that these facts may be properly discounted. In doubtful cases the result should be verified by the intravenous method.

The newer conceptions of the pathology of the gall bladder with associated disease of the liver makes it likely that a contiguous infection of the cystic duct, edema, round-cell infiltration, and obliteration of the lumen will make the diagnosis of cholecystitis amenable to the tetraiodophenolphthalein concentration test, so that the absence of the gall-bladder shadow will explain many early pathological processes heretofore not demonstrable. Saralegui demonstrated the outline of the cystic duct in a case of obstruction.

At present there is much experimental work demonstrating the true function of the gall bladder, its physiology in the living subject, and its reaction to various kinds of food and drugs, so that new light on the various phenomena during the functioning of this organ is being recorded.

Our technic is as follows: On the evening preceding the gastro-intestinal examination we direct the patient to take from twelve to twenty 5-grain capsules of sodium tetraiodophenolphthalein, the number depending upon the size of the individual. Two of these are given immediately after the evening meal, and two every fifteen minutes until all have been taken. The patient should lie upon the right side while taking the capsules and for at least an hour after. The patient reports the following morning at 8:30 o'clock without breakfast. At least one large film is made, to include the entire liver, spleen, and upper abdomen, and three additional localized films of the gall-bladder area. By this means we determine the outline of the liver, kidney, and spleen, and the gall bladder if it has filled. In addition, we determine whether the capsules have been dissolved, and usually, by the distribution of the drug, can see whether they dissolved early or late.

In some instances the gall bladder is best visualized in the posterior film, and in others it is shown best in the anterior film. We cannot tell in advance in which position it will be shown best; therefore, we make both. The patient is then given two fresh eggs, raw, with two wineglassfuls of barium sulphate which is mixed with six ounces of buttermilk. This is beaten until thoroughly mixed, then the top of a bottle of milk (one quart), which represents 7 per cent cream, is added so as to make a pint. This is given to the patient and the routine gastro-intestinal barium study is made. Two to four hours later another study is made of the gall bladder, making two films anteriorly and two posteriorly to determine the emptying or concentration power of the gall bladder by noting its shrinkage in size, as well as its change in position and outline. The relation of the barium-filled stomach to the gall bladder during the fluoroscopic examination is an important observation. Twenty-four hours later the patient is studied again, special gall-bladder films being made. During this time regular habits and diet are maintained.

If a patient is referred for a gastro-intestinal examination and has not had preliminary instructions about taking the salt, we proceed in the usual way and make the gall-bladder dye study at the end of forty-eight hours, giving the patient the "tetraiodo" at the end of the second day. The first examination depends upon demonstrating direct evidences of gall-bladder disease. The special examinations are then made at the forty-eight-hour period of the usual gastro-intestinal study, just the same as we would make them if the salt had been given at the first visit. In this instance, we give the above milk, egg, and cream mixture without the barium sulphate.

Conclusions

1. Cholecystography has been proved of definite value in the diagnosis of gall-bladder disease.

2. In patients with obscure abdominal symptoms, it is important to know the conditions of the entire gastro-intestinal tract.

3. We have found that both studies are of supplementary value, and they are therefore combined.

4. By such complete studies one can determine the condition of the entire alimentary canal, and enable the clinician to give the best possible advice.

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ACTINOMYCOSIS IN PENNSYLVANIA WITH REPORT OF A CASE

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Actinomycosis was first observed in cattle by Leblanc,[1] in 1826, who called the disease "osteosarcoma." Langenbeck,[2] in 1845, noted the sulphur-yellow granules in the discharge from an abscess, but failed to recognize their relation to actinomycosis. Bollinger,[3] in 1877, observed this condition to be a specific parasitic disease in cattle. Israel,[4] in 1878, first recognized this condition in man, and stated that it was the same disease which Bollinger had reported in cattle. Ponfick,[4] in the same year, reported that this disease in man was identical with the disease reported in cattle. Harz,[5] a botanist, in 1878 at the instigation of Bollinger studied, described, and named the causative factor the "actinomyces" on account of its raylike structure. Majocchi[4] is given credit for being the first to describe this disease as it involved the skin. Belfield[2] was the first in this country to recognize the ray fungus. The first case reported in this country was by Murphy[6], in 1885, who was followed by Ochsner, Schirmer, and Bodamer,[6] in 1889, and since then case reports have been common.

Frequency

In 1902, Erving,[7] after a thorough review of the literature, which included the complete study of Ruhräh in 1891, stated that only 100 cases had been reported to that date. More recently, Sanford,[8] in 1923, in an excellent paper reviewed the statistics on the distribution of actinomycosis in the United States. Attention has been repeatedly called to the prevalence of this disease in the human, and the incidence between human and cattle actinomycosis has been shown to be more frequent than that of human and bovine tuberculosis. Interesting as the statistics are, it was surprising to note the comparative infrequency of this disease in Pennsylvania. This can be explained on the basis that the condition has not been properly recognized, or when recognized it was not reported either in the literature or to our public boards of health. It was because of this infrequency of case reports that an attempt was made to obtain from every possible source a collection of data from which definite conclusions could be drawn concerning its frequency in this state. Thereupon the following methods of inquiry were carried out:

First, a circular letter was sent to the Boards of Health of 65 of the first-, second-, and third-class cities in the State, asking their experience with this disease in the past ten or more years. Surprisingly, replies were obtained which indicated that only five cities (Altoona, Philadelphia, Pittsburgh, New Castle, and Uniontown) had recorded but a single case during that period of time.



Case of Actinomycosis

Second, a similar letter was sent to 150 of the leading hospitals of the State. The positive replies returned were: Williamsport Hospital, 2 cases; Mercy Hospital, Pittsburgh, 7 cases (5 primary, 2 secondary); Presbyterian Hospital, Pittsburgh, 1 case.

Third, another letter was sent to a selected group of physicians in the State, and 15 unpublished cases were recorded in this manner.

Lastly, a search was made through the available literature. In Table 1 of Sanford's paper,[9] comprising the North Atlantic Coast States, which include Pennsylvania, New York, and

Maryland, the reported cases totaled 103, including one case from the District of Columbia. Of this number, 21 were attributed to Pennsylvania; 13 of these cases were published, and 8 were unpublished. The latter data were obtained by personal letter (1 case), from hospitals (2 cases), and public-health officers (5 cases). In a map variously shaded to contrast the areas of distribution, Pennsylvania was classified under the 15- to 30-case area. These statistics check closely with those reported herein, with the exception that the available literature revealed only 11 published cases in my search, instead of 13 cases as reported by Sanford, and the unpublished cases gathered by me totaled 30, against 8 recorded by him. It is evident, then, from the data obtained, that actinomycosis is a comparatively rare human disease so far as Pennsylvania is concerned. To date, it may be safely stated that only 14 cases, including my case, have been published in the literature from this State, while the recognized but unpublished cases total at least 30 if not more cases.

The following report is from the Pennsylvania State Department of Health:

Reported Cases of Actinomycosis in Pennsylvania

Year	*Cases*	*Year*	*Cases*
1915	2	1920	0
1916	0	1921	0
1917	1	1922	0
1918	1	1923	1
1919	1	1924	0

Characteristics

Because of this apparent infrequency, it might be well to review hastily a few characteristic features of this disease. For a complete study of the bacteriologic features, the reader is referred to the works of Wright[9] and of Sanford and Magath.[10] Much controversy has arisen over the classification of the organism, and for this reason reference is made to the *Report of the Committee on Nomenclature of the American Society of Bacteriologists*[11] for the accepted classification. The disease is infectious, but not highly so, and communication from one individual to another is comparatively rare. Animals, particularly cattle, horses, and hogs, are commonly infected. Some individuals appear more suspectible than others.

It is more common in the male than the female; about 73% of cases reported are in the male. It is usually classified as a disease of the young adult, since most cases reported are between the ages of 20 and 30, but it is also found in old age. Those handling cattle and fodder, such as liverymen, farmers, millers, and dairymen, are most commonly infected.

Most cases reported are of transmission from animal to man, and by traumatism when inanimate objects were the media by which the fungus was introduced. It is not always easy to trace the source of infection, but the fungus is said to flourish on corn, straw, and barley, and it is by chewing these grains that infection is spread through an infected or carious tooth.[12] It can be introduced through the gastro-intestinal tract, and is also found in crypts of the tonsils, the buccal cavity, and in carious teeth of those patients having the disease.[12]

All tissues and organs of the body may be affected. The disease usually develops at the site of injury by direct inoculation, and is capable of producing metastatic foci. Leith, quoted by Pusey,[13] gives the following statistics on the site of primary occurrence: Head and neck 52%; tongue 3.7%; abdomen 21.6%; lungs 13.2%; skin 2.5%; doubtful 6.9%. It can be seen that primary actinomycosis in the skin is exceedingly rare, and the skin is usually involved from the underlying tissues.

Actinomycosis is primarily a suppurative process characterized by the formation of granulation tissue and the presence of pus with peculiar "sulphur yellow" granules, or "Drusen" of the German writers, which are very characteristic. These granules represent a mass of microscopic, densely set rosettes of club-shaped filaments with a radial arrangement. Each rosette consists of a central core of irregularly disposed, branching filaments, with a general radial arrangement. At the periphery of the filaments are refringent club-shaped or bulbous bodies.

Case Report

Mr. F. S., aged 20, Austrian, coal miner, complained of a swelling and discharging of the right jaw. The patient stated that on November 29, 1924, he noticed a swelling below the angle of the right mandible for which he consulted a physician. The latter diagnosed the condition as a "tooth abscess," and made an incision through the mouth into the base of the abscess for the purpose of draining the infected lower right molar tooth. Within twenty-four hours the entire right face was swollen, edematous, and painful, preventing movements of his jaw. This condition was then poulticed for two weeks, after which a sinus formation developed over the first noticed area of swelling. After the discharge appeared, the swelling subsided, and a series of five discharging sinuses developed at intervals, until his present condition resulted. Previous to his present illness, he had been receiving dental attention for "bad teeth." The patient and his physician were unable to find any similar infection within his vicinity in either man or cattle. The animals at his place of occupation (coal-mine) are free from actinomycosis.

Examination revealed that over the right side of the face extending from the angle to the symphysis of the jaw both above and below the mandible is a series of discharging sinuses, five in number, from which, upon

pressure, a semiliquid, greenish-yellow, odorless pus could be expressed. In this, at first examination, no free sulphur-yellow granules were present. (The granules were discovered on the fourth day after admission to the hospital.) The entire skin area was inflammatory, assuming a reddish-purple, indurated appearance. The skin over this area showed superficial desquamation.

The sinuses were rather deep and obliquely pierced the layers of the skin. They varied from ½ inch to 1½ inch in depth. The bony framework was not involved, and much pain was elicited upon pressure about or probing the sinuses. The sinuses below the mandible were modified in shape and course by the indurated cleavage lines of the skin. The mouth showed only the remains of the previous incision and the partially decayed tooth through which the infection probably entered. No glandular involvement was present, and the eruption appeared to be confined to the skin structure alone.

The physical examination was negative. The laboratory examinations, including the blood Wassermann were negative. No success was secured in growing a culture of the ray fungus. The examination of the granules, however, revealed the typical rosette and mycelial thread formation. The case was shown before a meeting of the Pittsburgh Dermatological Society, where the diagnosis of actinomycosis was accepted without question by those present.

Diagnosis

The diagnosis of actinomycosis of the skin in a typical case offers no difficulty. The location of the disease and the history, especially in those dealing with horses and cattle, always arouses suspicion, but the final diagnosis is made upon recovery of the fungus from the discharge in which the sulphur-yellow granules are present, or from a section made of the tissues in which the organism is found.

It must be differentiated from syphilis, sarcoma, carcinoma, tuberculosis, and at times sporotrichosis, blastomycosis, and mycetoma. The gummatous ulceration of syphilis presents a cold process, definitely punched-out, usually unilateral, single or multiple, the base of which is uneven and pus bathed, and the conformity circinate or serpiginous. The history of a chancre, with a positive blood Wassermann or often a healed gummatous lesion, leaving a fine tissue-paper-like scar with peripheral pigmentation, serve in its differentiation. In sarcoma, the age of the patient, the history of rapid growth, the bony involvement, the lack of ulceration, and early metastases distinguish it from actinomycosis. In carcinoma, the patient is usually middle-aged or past, the border of the lesion is rolled out and pearly, the ulceration is marked, with crusting and bleeding on manipulation, a glandular involvement is present in the later stages, and the edges of the lesions are more indurated. In doubtful cases, microscopic examination will establish the diagnosis.

In scrofuloderma (tuberculosis of the skin), the process is usually in the young adult and is secondary to glandular tuberculosis. The ulceration is due to pressure necrosis from the underlying enlarged glands. The skin shows a red, then a purplish nodular formation, which undergoes necrosis, and a secondary sinus formation results. The ulcerations are uneven and ragged, usually discharging a yellow or straw-colored serum. The skin presents a peculiar bluish-red or purplish discoloration, and the process, unless changed by secondary infection, is a "cold abscess." The sinus formation is deep, and leads to the underlying glands.

In sporotrichosis, a series of nodules and ulcerations following the course of the lymphatics is associated with a history of localized trauma. It usually is found on the extremities, and a culture or direct examination of the discharge reveals the long slender mycelial threads with the cigar-shaped spores.

In blastomycosis, the lesion is usually papillomatous, sharply defined, giving the appearance of an infected honeycomb. The double contoured, single or budding, highly refractile organism is present in the discharge or sections of the tissue.

In mycetoma, a disease rarely found in the regions where actinomycosis is present, there is a characteristic deformity, absence of pain, systemic or visceral involvement, with multiple sinus formation from which is recovered the fish-roe-like black particles which escape in the discharge from the lesions.

It must be remembered that the recovery of the ray fungus may not be easy, and repeated examinations are often necessary before it will be recovered. This is especially true when iodids have been given.

Treatment

The treatment of actinomycosis is comparatively easy once the diagnosis is made. Iodid, first introduced by Thomassen, is the drug of choice, and constitutes the most efficient and reliable remedy, whether given by the oral or intravenous route. Copper sulphate, as recommended by Bevan, given in dosages of one to three grains daily, is very useful and curative, although not so popular as the iodids. Locally, the usual surgical care and intervention is given where necessary. Tincture of iodin, Lugol's solution, or copper sulphate (½-2%) as irrigations or wet dressings are very useful. Fractional dosages of unfiltered x-ray are most efficient, and when combined with the iodids, are almost specific in most cases. The case

reported received 4 one-quarter skin units of unfiltered x-ray at a week's interval, together with eighty grains of potassium iodid daily, and had an uneventful recovery.

Prognosis

The majority of localized cases recover readily. Practically all systemic cases die, and this possibility should always be borne in mind when treating this disease. The orbital, upper jaw, visceral, and lung infections are most serious, and the prognosis is always to be guarded. Pyemic symptoms are always serious when associated with this disease.

5026 Jenkins Arcade.

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SACRAL ANESTHESIA IN OPERATIONS ON THE RECTUM*†

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Sacral anesthesia is the state of analgesia produced by interrupting the conduction of the sacral nerves with an anesthetic, and usually may be accomplished by one of three procedures: caudal, presacral, or transsacral block. Caudal block consists in injecting the anesthetic into the sacral canal through the hiatus sacralis and outside the dura. Presacral block consists in the injection of solution on the anterior surface of the sacrum around the sacral nerves. Transsacral block consists in injections through the posterior sacral foramina to the anterior primary divisions of the sacral nerves.[1, 2] The procedure used in this series of cases was in most instances a combination of caudal and transsacral block.

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The cases have been grouped according to diagnosis. Anesthesia in each case was good, fair, or poor, or was "necessarily combined." A good result was obtained when the operation was satisfactorily performed without discomfort to the patient. The result was fair when the regional anesthesia was sufficient but not entirely satisfactory. A poor result indicated an absolute failure. Anesthesia was necessarily combined when it was found essential to resort to light general anesthesia because of pain, nervousness, or unexpected increase in the scope of the operation.

The result was designated as untoward when the patient showed an untoward reaction to the anesthetic, which was graded as slight when there was a momentary elevation or depression in pulse rate, tremor, pronounced palpitation, slight momentary nausea, or a combination of these symptoms. A marked reaction was manifested by a marked increase or decrease in pulse rate, with tremor, palpitation, nausea frequently and vomiting occasionally, pallor, sweating, and rarely anginal attacks with respiratory embarrassment. A marked reaction was often manifested by two or three of these symptoms alone if they were sufficiently grave. For example, a pulse rate of about 56, with considerable pallor, nausea, and vomiting was considered a marked reaction.

Cases in which a combination of regional and general anesthesia was planned from the outset were excluded from the tables of percentages of success of regional anesthesia. These were called "intentionally combined."

Careful attention to minor details in carrying out the procedure of transsacral injection is an important factor in producing satisfactory anesthesia without untoward results.

Technic

The patient is placed in the prone position on the table with a medium-sized pillow under the hips to accentuate the bony landmarks (Fig. 1). Care must be taken to make the patient comfortable on the table before starting the injection. Benzine, ether, and iodin, followed by alcohol, are used as a routine for the aseptic surgical preparation of the skin. Sterile towels or a perineal sheet are used as drapes.

The two cornua of the sacrum are palpated with the first and second fingers of the left hand (Fig. 2), and a little superior and in the median line the lowest spinous process of the sacrum is identified (Fig. 2*e*). Above the triangular area X (Fig. 2) an intradermal wheal is raised. A 50-mm. needle is then attached to the syringe and inserted at an angle of from 30 to 40 degrees

from the surface of the skin. One may be sure the sacral canal has been entered after the needle is felt to pass through a dense membrane (sacrococcygeal ligament), and a shallow space, and come to rest against bone. Ten cubic centimeters of a 1-per-cent procain-epinephrin solution is injected to provide a painless entry for the caudal needle. The syringe is then detached, and the needle left *in situ* as a guide for the introduction of the caudal needle. This needle is



Fig. 1. Patient in prone position on the table with pillow under hips to accentuate bony landmarks. (a) Position of syringe when the wheal is raised.

next tested to see that it is sharp and that the stilet fits perfectly. The needle is held with the thumb and middle finger of the right hand while the tip of the index finger holds the stilet firmly in place (Fig. 3). The tips of the index and middle fingers of the left hand are placed on the skin on each side of the 50-mm. needle to immobilize the tissues while it is withdrawn and the caudal needle inserted in its place. The 50-mm. needle is withdrawn with the third and fourth fingers of the right hand (Fig. 3*b*), and the sacral needle (Fig. 3*c*) inserted at the same angle, until its point is felt to pierce the sacrococcygeal ligament at X in figure 3. The sacral needle is then rotated through 180 degrees so that the beveled edge slides over the bone, depressed to a position parallel with the long axis of the canal, and inserted 4 or 5 cm. into the canal in the median line (Fig. 3*c*). The object is to place the point of the caudal needle in the center of the caudal canal (Fig. 4). After the caudal needle has been placed correctly, the stilet is withdrawn, and, if neither blood nor spinal fluid appears, the half-filled syringe is attached and gentle aspiration is made. A few drops of procain-epinephrin solution are injected to make sure the needle is patent, and again aspiration is made to insure that the point of the needle is not in a vein or inside the dura. When the needle lies in the proper place, the solution passes in almost without resistance. Resistance may occur when the point of the needle is against bone, or if it is embedded in tissue outside the canal. The resistance should disappear when the needle is rotated, if the point has been impinging on bone. Resistance will not disappear if the point of the needle is embedded in tissue. From 20 to 30 c.c. are injected through the caudal needle before the transsacral injection is begun. When there is plenty of time, it is desirable to wait a few minutes at this point to allow the caudal anesthesia to extend, so that the transsacral injection may be less painful.

Evidence that the caudal needle is in the caudal canal consists of: (1) aspiration of blood or spinal fluid; (2) free flow of fluid from syringe to canal; (3) change in respiration, usually an increase in depth of respiration as the solution is being injected; (4) tingling or hyperesthesia referred to the thighs or legs, and a sensation of pressure in the sacrum; (5) often a slight change in pulse rate; and (6) early anesthesia of the skin over the coccyx, late anesthesia of the perineum, and absence of the anal reflex.

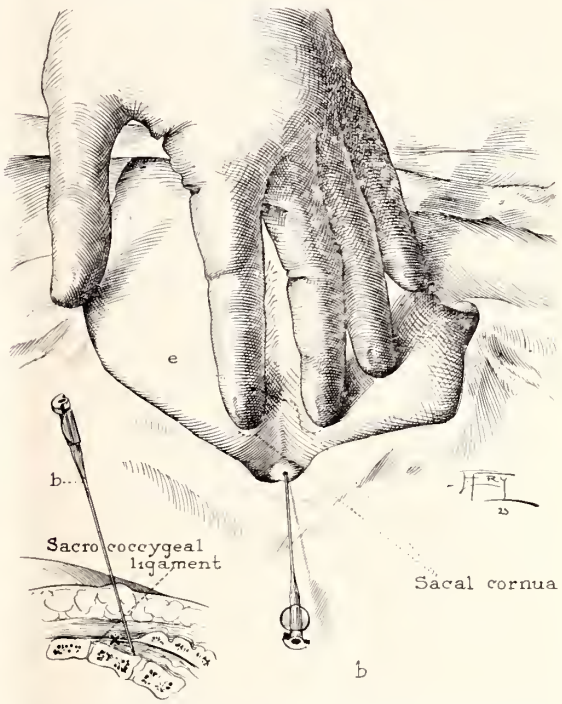


Fig. 2. Identification of the sacral cornua, and the insertion of a needle through the sacrococcygeal ligament into the mouth of the caudal canal.

Evidence that the caudal needle is outside the caudal canal is manifested by: (1) persistence of resistance to the introduction of the solution, even after the needle is rotated; (2) absence of change in respiration; (3) localized pain over the sacrum from deep injection without tumefaction; (4) tumefaction from subcutaneous injection; (5) pressure on soft tissues over the posterior surface of the sacrum felt as counter

Table 1

HEMORRHOIDECTOMY

						Preliminary Medication					Untoward Reaction			Result of Anesthesia			
	Total	Males	Females	Risk 1	Risk 2	Morphin	Morphin and Atropin	Codein	Codein and Morphin	None	Marked	Slight	None	Satisfactory	Fair	Poor	Intentionally Combined
Cases	382	222	160	380	2	208	8	153	1	12	9	26	347	363	13	5	1
Percentage	....	58.1	41.8	99.4	0.5	54.4	2.0	40.0	0.2	3.1	2.3	6.8	90.8	95.0	3.4	1.3	0.2

pressure against the advancing plunger of the syringe; (6) absence of marked change in the pulse rate; and (7) absence of anesthesia and failure of the anal sphincter to relax.

The posterior superior iliac spine is the most prominent landmark for starting the transsacral injection. If the patient is fat, the skin over it is usually dimpled, otherwise the spine is palpable. The posterior foramina lie below a line drawn from a point on the skin 1 cm. mesial and 0.5 cm. below the posterosuperior spine, to a point 1 cm. external to the sacral cornu on the same side. Three wheals are raised in the skin on this side: one at the upper point, one at the juncture of the upper and middle thirds, and one at the juncture of the middle and lower thirds. These wheals should be over the second, third, and fourth foramina (Fig. 5). The first foramen will be found in line with the second, and at a distance above it equal to the distance of the second from the third. Two cubic centimeters of procain-epinephrin solution is injected into the fourth, 3 c.c. into the third, 4 c.c. into the second, and 5 c.c. into the first. The fourth foramen should be injected first, as the caudal anesthesia occurs at the lower end of the sacrum sooner than above. Prolonged probing for a foramen must be avoided, and if a foramen is not located after three or four attempts, another foramen should be sought. When one is located it will serve as a landmark for the others. After the transsacral injection has been completed, more solution is injected into the caudal canal, if the patient's condition permits.

In three or four cases the caudal canal was not found, and transsacral block alone was employed. Two or three times the usual amount of solution was injected into the foramina, and the tissues infiltrated from skin to bone in a semicircle from the fourth foramen on one side to the fourth foramen on the other to block the filum terminale. In our limited experience with this procedure there have been no failures.[3]

Hemorrhoidectomy

(See Table 1)

The number of foramina injected and the amount of solution used in preparation for hemorrhoidectomy varied with the temperament and tolerance of the patient, and the amount of anesthesia desired. High anesthesia was necessary because the rectosigmoid was examined through

Table 2

MISCELLANEOUS OPERATIONS ON RECTUM*

						Preliminary Medication					Untoward Reaction			Result of Anesthesia			
	Total	Males	Females	Risk 1	Risk 2	Morphin	Morphin and Atropin	Codein	Codein and Morphin	None	Marked	Slight	None	Satisfactory	Fair	Poor	Necessarily Combined
Cases	255	145	110	246	9	117	19	108	1	10	11	18	226	245	3	5	2
Percentage	....	56.8	43.1	96.4	3.5	45.8	7.4	42.3	0.3	3.9	4.3	7.0	88.6	96.8	1.1	1.9	0.7

*Ninety-five cases of anal fistula, thirty-three of anal fissure, sixteen of anal papillæ, twelve of anal papillæ and fissure, twelve of rectal polyps, eleven of ischiorectal abscess, and other minor rectal surgical diseases.

the anoscope as a routine. This is produced by caudal injection if the point of the caudal needle has been inserted as high as the level of the second foramen, and if there is no need for haste. When the point of the caudal needle lies below this level, high anesthesia may be obtained by injecting 10 c.c. into each second foramen.

The situation of the point of the caudal needle may be estimated by measuring with the stilet on the surface over the posterior aspect of the sacrum, remembering that the second foramen lies 1 cm. medial and 0.5 cm. below the most prominent point of the posterosuperior iliac spines.

Of 382 patients with hemorrhoids, 222 (58 per cent) were males, and 160 (42 per cent) were females. In 380 cases (99.4 per cent) the risk was grade 1, and in two (0.5 per cent) the risk was grade 2. In 208 cases (54.4 per cent) a preliminary injection of morphin was given; in eight (2 per cent) morphin and atropin; in 153 (40 per cent) codein, and in one (0.2 per cent) codein and morphin, while in twelve (3.1 per cent) no preliminary medication was used. There was a marked untoward reaction in nine (2.3 per cent), slight untoward reaction in twenty-six (6.8 per cent), and no untoward reaction in 347 (90.8 per cent). Anesthesia was satisfactory, with profound relaxation of the anal sphincter, in 363 (95 per cent) of these cases; fair in thirteen (3.4 per cent), and poor, requiring some supplementary local infiltration, in five (1.3 per cent). In one case anesthesia was "intentionally combined."

Miscellaneous Group
(See Table 2)

The technic used for the injection in this group was the same as that used for hemorrhoidectomy. This series included minor rectal surgical maladies such as anal fistula, anal fissure, rectal polyp, rectal abscess, postoperative scars, and so forth.

Of 255 cases, 145 were males and 110 females. In 246 cases the risk was classified as 1, and in nine as 2. Morphin was given in 117 cases, morphin and atropin in nineteen, codein in 108, codein and morphin in one case, and in ten no preliminary medication was undertaken. Marked untoward reactions occurred in eleven (4.3 per cent), slight untoward reactions in eighteen (7 per cent), and no untoward reaction in 226 (88.6 per cent). In 245 (96.8 per cent) anesthesia was entirely satisfactory; in three (1.1 per cent) it was fair, and in five (1.9 per cent) it was poor. Anesthesia was "necessarily combined" in two (0.7 per cent).

Table 3

CARCINOMA OF THE RECTUM

							Preliminary Medication					Untoward Reaction			Result of Anesthesia			
	Total	Males	Females	Risk 1	Risk 2	Risk 3	Morphin	Morphin and Atropin	Codein	Codein and Morphin	None	Marked	Slight	None	Satisfactory	Fair	Necessarily Combined	Intentionally Combined
Cases	80	49	31	15	59	6	42	35	1	1	1	5	7	68	52	6	10	12
Percentage	....	61.1	38.7	18.7	73.7	7.5	52.5	43.7	1.2	1.2	1.2	6.2	8.7	85.0	76.4	8.8	14.7	15.0
High lesions	64	....	....	....	....	....	....	....	....	....	....	....	....	....	40	4	10	10
Percentage	....	....	....	....	....	....	....	....	....	....	....	....	....	....	74.0	7.4	18.5	15.6
Low lesions	16	....	....	....	....	....	....	....	....	....	....	....	....	....	12	2	....	2
Percentage	....	....	....	....	....	....	....	....	....	....	....	....	....	....	85.7	14.2	....	12.5

Posterior Resection of the Rectum
(See Table 3)

In preparation for posterior resections of the rectum, a complete transsacral and caudal injection was done. If the patient's condition permitted, 10 c.c. was placed in each first foramen instead of the usual 5 c.c., in an attempt to render traction on the bowel less painful.

In this group we have classified the lesions as high or low. The pain of the necessary traction associated with delivering the rectum in the case of a high lesion is directly proportional to the amount of the traction. Incisions in the peritoneum are also painful.

There were eighty cases in this series; forty-nine patients (61 per cent) were males, and thirty-one (39 per cent) females. In fifteen cases (18.7 per cent) the risk was classified as

1; in fifty-nine (73.7 per cent) as 2, and in six (7.5 per cent) as 3. For a preliminary hypnotic, morphin was given in forty-two cases (52.5 per cent), morphin and atropin in thirty-five (43.7 per cent), and codein in one (1.2 per cent). There was a marked untoward reaction in five cases (6.2 per cent), a slight untoward reaction in seven (8.7 per cent), and no untoward reaction in sixty-eight (85 per cent). This method of injection produced satisfactory anesthesia in fifty-two cases (76.4 per cent),



Fig. 3. Replacement of the 50-mm. needle with the insertion of the caudal needle.

fair anesthesia in six (8.8 per cent), and in ten it was necessarily combined, light general anesthesia being required. Anesthesia was intentionally combined in twelve of the eighty cases; these were not figured in the percentage of cases in which anesthesia was satisfactory.

In sixty-four cases the lesion was high, and in ten of these the anesthesia was intentionally combined. Of the remaining fifty-four cases, a satisfactory anesthesia was obtained in forty (74 per cent), fair in four (7.4 per cent), and necessarily combined in ten (18.5 per cent) because of pain from traction or from peritoneal incision.

In fourteen cases the lesion was low. In twelve (85 per cent) the anesthesia was satisfactory, in two (14.2 per cent) fair, and in two of the sixteen cases (12.5 per cent) it was intentionally combined.

Untoward Reactions

When the caudal needle is properly placed, the degree of the reaction depends principally on the strength and quantity of the solution used, the rate of injection, and the tolerance of the patient.

During the injection, the patient is watched carefully by an anesthetist or a nurse who records and informs the regional anesthetist of any marked increase or decrease in the pulse rate. Severe reactions are avoided by temporarily discontinuing the injection when slight reactions appear. For example, 100 c.c. of a 1-per-cent procain-epinephrin solution may be injected slowly in the case of the average adult during a period of a half hour or more, without producing untoward reaction, whereas the same amount injected rapidly, in ten minutes, will usually produce a marked untoward reaction.

Usually patients react more or less to the injection of procain-epinephrin solution into the sacral canal. An increase in the pulse rate of from 20 to 30 beats a minute, without other signs of untoward reaction, often occurs during an injection, but may not of itself constitute an untoward reaction.

Pain, nervousness, or fear may be responsible for some of the signs of slight reaction.

The injection is temporarily discontinued if the patient's pulse rate increases from normal to 120 beats a minute, or if it decreases to 60 or below. A delay of ten or fifteen minutes is usually sufficient to allow the pulse rate to return to within these limits, if the reaction has been slight.

Reactions to Intravenous Injections

A sudden untoward reaction probably denotes injection into a vein. The degree of the reaction depends on the amount of the drug injected into the blood stream.

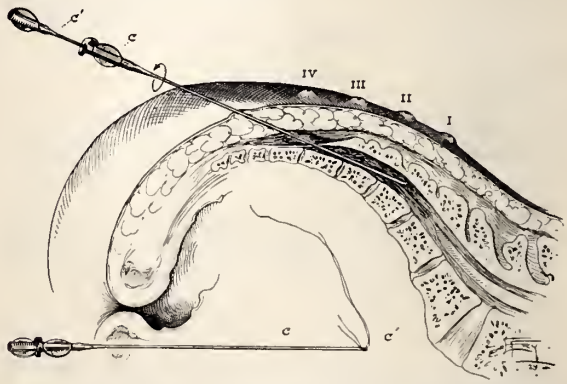


Fig. 4. The caudal needle properly placed in the caudal canal. The needle in the lower section of the figure represents a poorly-fitting stilet (c^1), giving the needle a forked point which can pick up threads or other material.

Three patients in this series developed spinal anesthesia through puncture of the tip of the dural sac with the caudal needle. In each instance there was the typical reaction that usually accompanies spinal anesthesia.

At the first sign of an untoward procain reaction the contents of an ampule containing 7.5 grains of caffein sodium benzoate is given intramuscularly. If the pulse rate continues to decrease, 5 minims of a 1:1000 solution of

epinephrin is given. This dose of epinephrin is repeated as necessary to produce an increase of blood pressure and pulse rate.

Reactions to Epinephrin

The ordinary reaction to epinephrin subsides within fifteen minutes without treatment. A severe reaction, with angina pain and respiratory embarrassment may be partly relieved by the inhalation of 95 per cent oxygen and 5 per cent carbon dioxid, and the hypodermic administration of morphin sulphate.

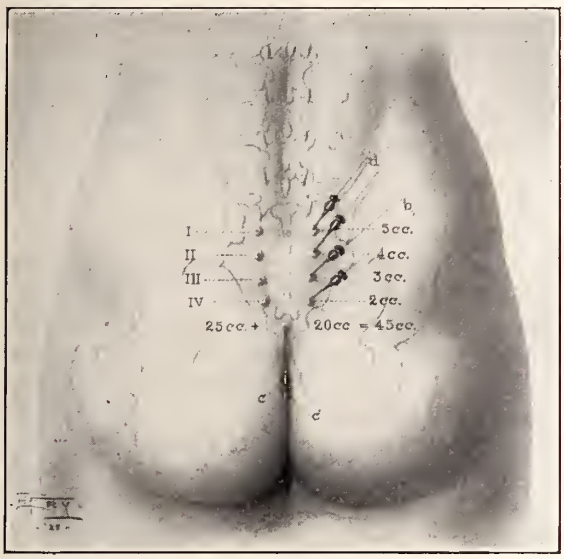


Fig. 5. Caudal needle *c* in place; wheals over the first, second, third, and fourth sacral foramina on the left, and needles inserted into the corresponding foramina on the right. The distances *a* and *b* represent one finger's breadth.

Preliminary Medication

The patients in this series were given a preliminary hypnotic of 1/6 grain of morphin, and 1/150 grain of atropin, or 1 grain of codein before going to the operating room. Frequently a patient who is a poor prospect for local anesthesia may be converted into a good prospect by the judicious use of morphin in amounts sufficient to quiet him without jeopardizing his safety.

If the insertion of the needle produces marked pain, nervousness, or fear, it is probably best to use some form of general anesthesia, unless sufficient time is available for further preliminary hypnosis. Light general anesthesia might well be employed for patients who are unwilling to coöperate, and are therefore poor prospects for local anesthesia.

Syringe and Needles

The syringe and needles used were those described elsewhere.[1, 4, 5]

Delayed Anesthesia

There were a few cases of delayed anesthesia, due to the injection of cold procain-epinephrin solution. To produce satisfactory anesthesia, the temperature of the solution should be between 99° and 100° F. Poor anesthesia was usually due either to beginning the operation before anesthesia was established, or to failure to inject the solution into the caudal canal.

Unilateral Anesthesia

When a unilateral anesthesia results from a caudal injection, it is usually because the point of the caudal needle is placed in one side of the canal. In such cases, either the needle should be reinserted correctly, or the foramina injected on the sensitive side.

Solution

One-per-cent procain solution was used as a routine. Five minims of epinephrin solution was usually added to each 100 c.c. of procain solution immediately before the injection was started.

To make a 1-per-cent solution of procain, 250 c.c. of hot, freshly sterilized physiologic sodium-chlorid solution is added to 2.5 gm. or 37.5 grains of procain powder. This solution is held at the boiling point for three minutes. It is not boiled vigorously. The solution should be cooled to 99° or 100° F. before epinephrin is added and the injection is started.

Conclusions

1. Caudal and transsacral block usually provide a most satisfactory anesthesia and relaxation for operations on the rectum.

2. Careful attention to detail in the technic of injection is important.

3. Marked untoward reactions are avoided by making injections slowly.

4. Five minims of 1 : 1000 solution of epinephrin to each 100 c.c. of procain solution has not resulted in marked reactions to the epinephrin.

5. A patient who is a poor prospect for local anesthesia may be converted into a good prospect by the judicious use of morphin in amounts sufficient to quiet him without jeopardizing his safety.

6. Failure to anesthetize is usually due either to failure to inject the procain-epinephrin solution into the caudal canal, or to starting operation before anesthesia can become established.

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ETHYLENE AND OXYGEN ANESTHESIA IN GENERAL SURGERY*

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Every thoughtful present-day surgeon gives his anesthesia department his most careful attention, for he knows that if he is to safeguard his patients, he must choose and train his anesthetists with the greatest care, and use his best judgment in the choice of anesthetics as well as in their administration.

The writer has never considered ether to be the ideal anesthetic for the general surgeon, and very early in his work employed nitrous oxid and oxygen extensively. Between the years 1913 and 1924, this form of anesthesia was used in the Robert Packer Hospital, and this experience impressed him and his associates with its value in general surgery, as they believed it to be more desirable and safer than ether. However, they became very familiar with its dangers and limitations. Deep relaxation could not be obtained in gall-bladder, stomach, and deep pelvic cases, neither was relaxation complete enough to permit the reduction of fractures of the long bones or dislocations of the hip and shoulder. The writer considers that, in inexperienced hands, nitrous oxid and oxygen is a dangerous anesthetic.

The use of ethylene-and-oxygen anesthesia was begun in August, 1924, in only an occasional case at first, because the clinic was intimidated by the reports of ethylene's explosive properties. From August 1, 1924, to December 1, 1925, ethylene and oxygen anesthesia has been employed 1,590 times. It is now used in general surgery, except for nose, throat, and mouth cases and those cases where the cautery is used. We are impressed with ethylene's advantages over nitrous oxid and oxygen as a general anesthetic, and believe it to be safe. We are able to obtain relaxation which will permit operation upon all types of major abdominal cases and reduction of fractures of long bones and dislocations of the larger joints. In fact, it is an ideal anesthetic in traumatic surgery.

Ethylene is especially valuable in operations upon the thyroid gland, as the breathing is quiet and normal, and there is no excessive mucous secretion. Cyanosis, or any difficulty with breathing which may develop during the operation, can be attributed to the operator's manipulations, and not to the anesthetic.

As ethylene is known to have little effect upon blood pressure, it is an anesthetic well suited for the cardiovascular, the nephritic, or the diabetic patient who may require surgery.

The period of induction is short—from one to three minutes in our cases, averaging about three minutes for major cases—and it is not attended by any stage of excitement, nor does the patient experience any of the unpleasant sensations so commonly present during the administration of nitrous oxid and oxygen or ether.

The respirations are smooth and regular, and resemble those of normal sleep. There is not the stimulated labored respiration seen under nitrous oxid and oxygen or ether. The skin is closed and dry, and the color remains pink if the proper mixture is used. If too much ethylene is given, the patient becomes pale, the respirations shallow, and the pulse slow. Addition of more oxygen to the mixture will revive him quickly. After the period of induction, the oxygen may be increased fifteen to twenty per cent, and as this equals the amount of oxygen in the air, there is enough for thorough oxygenation of the blood during anesthesia. Cyanosis is absent even though deep relaxation may be required.

There is no excessive mucous secretion during the period of anesthesia, and for this reason it is questionable whether the preoperative use of atropin is necessary. The awakening from ethylene anesthesia is prompt and without the excitement so commonly seen when nitrous oxid and oxygen or ether is used.

A great many patients, about sixty per cent in our early work, vomited and retched upon awakening, while still upon the table. This did not continue after they were removed to their beds, except in a very small number of cases. During the past two months we have used carbon dioxid after the ethylene has been stopped, and find that the patients awaken in a very much shorter time, and that table vomiting and retching now rarely occur. We have noticed very much less postoperative discomfort since using ethylene. We believe vomiting, gas pain, and ileus have all been greatly reduced.

In 1,590 anesthesias, we have had but few postoperative pulmonary complications—about the same number as after nitrous oxid and oxygen—certainly far less than in a like number and kind of cases following ether. In one case, an extensive pulmonary infarct, following a

*Read before the Southern Surgical Association, Louisville, Ky., December 16, 1925.

cholecystectomy on the third day, resulted later in a pulmonary abscess which required a thoracotomy. Recovery ensued. In another, a complete collapse of the left lung, proved by physical signs and serial x-ray pictures, occurred on the third day after operation for simple hernia. The patient recovered. In a third case, a pulmonary abscess followed a cholecystectomy for empyema of the gall bladder. Elevation of temperature commenced on the second day, and on the seventh day there was a chill. The signs and x-ray evidence pointed to an abscess on the right lung. This patient kept the abscess well emptied by posture, and recovered without surgical intervention.

We have had blood-pressure studies made in several of our cases, and believe ethylene has but little if any effect upon the blood pressure. We do not believe, either, that ethylene increases oozing, as reported by some observers.

As mentioned above, ethylene has been employed in all types of major abdominal surgery. Our patients receive one-fourth or one-sixth grain of morphin a half-hour before anesthesia, and the abdominal wall is well infiltrated with 0.5 per cent of novocain. In only two cases of this series were we unable to obtain relaxation with ethylene—one an extraligamentary cyst, and the other an anal fistula. In both cases straight ether had to be employed. In very few instances has it been necessary to add any ether to the mixture.

The explosive properties of ethylene undoubtedly have been greatly exaggerated, because, if the proper precautions are taken, there is little danger of an accident. The modern gas machines designed to carry off and ground any static electricity have greatly reduced the danger from the static spark. The gas is lighter than ether vapor, and diffuses rapidly through the operating room. Good ventilation at all times is important. We never employ the cautery in the presence of ethylene.

Another objection is the odor—the sweetest sorghum-molasseslike odor. Fortunately, this is more objectionable to the visitor than to the patient. The operating-room team soon becomes accustomed to it, and does not notice it at all.

Few patients are annoyed by it if the first two or three inspirations are taken deeply. We have questioned many of our patients upon this point, and believe we are safe in saying that the odor was not at all disagreeable to them. As a matter of fact, we have had the most favorable opinions expressed by patients, especially from those who have had previous operations performed under ether or nitrous oxid or both.

Another objection to ethylene is the freezing of the machine, which occurs more commonly than with nitrous oxid and oxygen, but which can be readily controlled by the use of hot towels or hot-water bottles.

It is hoped that ethylene will be more generally employed, especially in major abdominal and traumatic surgery, and that the prejudice so common in the minds of many may be overcome.

The profession owes a debt of acknowledgement and gratitude to Drs. Luckhardt and Carter, of the University of Chicago, who in 1923 suggested the use of ethylene in surgery, and to Drs. Dean Lewis, of Baltimore, and W. E. Brown, of Toronto, who first employed it.

PYELITIS IN INFANCY*

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Pyelitis is inflammation of the pelvis of the kidney, caused by any organism. It is usually associated with nephrosis, nephritis, or ureteritis. It always follows some obstruction in the urinary tract below the pelvis of the kidney, and has, in my experience, never been primary; that is, the primary focus of infection lies elsewhere in the body.

Age Incidence

I have never seen the disease in a child under six months of age, but from this period on it is a relatively common disease. Dr. Ross, consulting pediatrician, states that he has seen it in a child of eleven weeks. Of course, it must be remembered that I see these cases only in consultation, and that probably accounts for my inability to report any cases under the age of six months.

Symptoms

These may be the most baffling of any of the diseases of infancy, or they may be so plainly indicated by the patient's condition that it is impossible to fail in diagnosis. In general, high fever, with or without a preceding chill, and marked gastro-intestinal symptoms are the dominating features. The urinary tract may not be suspected for days. In fact, it is my belief that often a child with pyelitis is treated for everything else but the actual condition, and finally recovers without the attending physician having had any idea of the true cause of the trouble.

Collection of urine under favorable conditions for examination is very difficult in infancy, particularly with girl babies. However, Dr. Ross informs me that he has the greatest success with

*Read before the Staff of the Erie Infant's Home and Hospital, May 27, 1926.

a clean or sterile tablet bottle fastened between the legs with adhesive plaster, in both boy and girl babies. Frequently the mothers can give no history of the preliminary illness, and the lungs are often so congested and the symptoms so confusing that pneumonia and other acute lung conditions may lead one astray. I have seen two cases of pyelitis treated for pneumonia in which there was no suspicion of the true condition until the nurse called the attending physician's attention to the fact that the child cried on voiding and winced when it was picked up.

Gastritis, enteritis, gastro-enteritis, together with appendicitis, are very often diagnosed for pyelitis. Usually, however, if the child is watched carefully, the nurse or mother will notice that it will cry when it voids, or that the urine is very cloudy and stains the diapers, although it may be entirely free from pus cells, due to a complete blockage of the ureter on the diseased side. If the physician will routinely examine the urine frequently, he will find microscopic pus in the great majority of his cases.

The one point in the symptomatology and differential diagnosis that seems almost pathognomonic is that with the high fever found in pyelitis, the child does not look nearly so sick as the temperature would indicate. These babies do not lose weight or robustness nearly so rapidly as in any other condition that causes such thermal reactions. Most often the examination of the urine clinches the diagnosis.

How many of the medical men attempt to get specimens of urine from the average infant with a gastro-intestinal upset? Often the mother applies remedies for colic, et cetera, and these little sufferers have repeated misunderstood attacks of pyelitis. Many times the doctor never sees them until later, say from 8 to 16 years, when stones and other lesions are discovered which require operative procedures for their relief. It is surprising how often in young boys and girls before the age of puberty operation is performed for stones in the genito-urinary tract—proof positive of earlier pyelitis.

Treatment

The first requisite in the treatment of any condition is the diagnosis. This once made, treatment is comparatively simple. Rest in bed, forcing liquids, acidity or alkalinity of the urine, the discovery and removal of the primary focus of infection, are all paramount. Drugs occupy a place of secondary importance.

The average case of pyelitis will result in complete recovery usually with moderate catharsis, rest, and fluids forced to capacity. An acid pyelitis or cystitis is much easier to treat and control than an alkaline one. If, however, under proper supervision the condition does not improve, one is justified in changing an acid urine to an alkaline, and vice versa. The one organism that can adapt itself to either an acid or alkaline medium is our old friend and common invader, the colon bacillus. Many urologists claim that the colon bacillus is not the primary invader, but that a streptococcus or staphylococcus or what not caused the primary condition, and that the colon bacillus merely usurps the place and outgrows the primary organism. Be that as it may, my experience in these cases is that we are dealing with colon-bacillus infections. Other organisms may cause the condition, but I have never seen any organism but the colon bacillus in pyelitis in babies under two years of age.

We are all interested in drug therapy in pyelitis. It is my personal belief that drugs given by mouth have not the slightest effect upon the infection; that, outside of changing the reaction of the urine, nothing is gained by drug therapy except in so far as symptoms are treated and controlled. For instance, costiveness must be corrected, fever must be abated if possible, the heart must be stimulated or rested by either stimulants or opiates, as indicated, and restlessness must be combated. If, upon forced elimination, flooding with water, rest, alkalization or acidification of the urine, the little sufferer fails to improve, cystoscopy with ureteral drainage is indicated.

Attention is particularly called to the fact that cystoscopy is *seldom* indicated, but when it is, it should not be delayed. The great majority of these little patients will get well without the services of the urologist. Occasionally one will not.

I have cystoscoped two girls and one boy under one year of age, and successfully treated them by catheter drainage and pelvic lavage with silver nitrate. I have also left retention catheters in the pelvis of the kidney for several days, laving the renal pelvis twice daily with excellent results. None of these babies has had to have an anesthetic, and it is remarkable to note the immediate improvement in their condition the moment mechanical drainage is instituted. Naturally, boys are far more difficult to cystoscope than girls, yet even these can be successfully dealt with by cystoscopy.

501 Commerce Building.

The Alpena (Mich.) County Medical Society in 1925 had twelve scientific meetings with an average attendance of seventeen, yet it put across six public meetings, addressed by its own members, with a total attendance of 15,000. This is a wonderful example of what can be accomplished by organized effort.

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Editorials

MEDICAL ETHICS

For a long time, advertising by a physician has been considered unethical by the medical profession. In the United States we are governed in the respect of ethics by the "Principles of Medical Ethics," as adopted by the American Medical Association, which is published in pamphlet form, and a copy placed by courtesy of the Association in the hands of the graduates in medicine of all the medical schools each year in this country, for their guidance.

It would seem that in some respects the regulation of ethics is more strict under the régime of the British Medical Association than of our national medical association. The press recently chronicled the fact that a furor had been caused in British medical circles. The conflict grew out of the use of Sir William Arbuthnot Lane's photograph, without his knowledge, in connection with an article entitled "The Athlete's Diet," on the back of menu cards in a chain of popular restaurants. It is stated that the protest made by the British Medical Association against this "personal advertising" necessitated the blocking out of the picture by means of 40,000 stickers. The Association denounced him, although he had resigned from membership about a year earlier over differences with the organization.

At that time, Sir William declared, "In England, if any one writes to newspapers and signs his name, the so-called Ethical Committee comes down on him and asks what business he has to educate the public. It is a self-constituted body with no right to exist, which writes rude, insulting letters to people. In America you can write freely to the newspapers, educating the people."

As stated in *Time,* "Sir William is wrong. The United States doctor does not write freely to the newspapers, and reputable newspapers often complain that it is not easy to get information from the United States doctors."

When Mr. Lane was in attendance upon the session of the Clinical Congress of the American College of Surgeons held in Philadelphia in 1925, he laid stress upon the use of improper food stuffs as a cause of carcinoma. Publicity was given to his utterances at that time by the press in this country, with the idea that much valuable information was being given the public regarding the preservation of health. As preventive medicine is the real aim of the medical profession, if the rule were meticulously applied that no publicity should be given by the lay press, discoveries of great importance might with difficulty be brought to the general attention.

It is difficult to resist the conclusion that one reason for the attitude of the British Medical Association is commercial rather than ethical, as doctors like members of other professions, often can profit by popular ignorance. But no one, for a moment, possibly could accuse so distinguished a surgeon of resorting to the procedure of which he stands accused, for his personal aggrandizement. Such a proposition is too ridiculous to be entertained.

About the same time, Dr. M. Porzio, the eminent surgeon of the Rome (Italy) Polyclinic, was attributed with the statement that "American surgical methods killed" a well-known film star who recently died, and further that "he is the second prominent Italian to be killed by American surgeons," the first being at the time of his death, the world's most distinguished tenor. Dr. Porzio is further credited with having said, "I esteem highly the research work of American laboratories, but I have no confidence in American surgery, etc." In his statement Dr. Porzio attacks the surgeons of this country in regard to their results in the treatment of appendicitis, claiming that "the percentage of deaths from

appendicitis in the United States is the highest in the world."

On the other hand, we are of the opinion that published statistics of surgical clinics will show that those of the United States are far superior to those of any other country, including Italy. In the first place, the film star did not die from appendicitis, but from septicemia, subsequent to rupture of a gastric ulcer, while it will be recalled that the operatic star's death was from empyema of the chest. Records of the treatment of both patients reflect credit on the American physicians and surgeons in attendance.

It seems so ridiculous that Dr. Porzio should make such a comment, more especially to the lay press, about patients whom he did not see, and when he has no personal knowledge of the conditions that were present before, during, or after operation. While there is no international code of medical ethics, yet the high ideals of our guild are universally the same, and it would seem to us that the statements of Dr. Porzio are in ill accord with the spirit of the Hippocratic oath.

THE NOVEMBER JOURNAL

The November number of the Journal will include a full report of the proceedings at the Philadelphia session of our Society. There will be a list of the new officers and committees, and a list of the new county-society reporters, as well as papers fresh from their presentation at the meeting.

Since the session this year convenes a week later than usual, and the material for this number of the Journal cannot be obtained before that time, it will not be possible to issue it on the usual date, and our members are requested to be patient with the office of publication. Every effort will be made to get it into the mails at the earliest possible date, and the fullest coöperation of the officers has been promised to this end.

THE FLORIDA HURRICANE

It would appear that the recent storm which struck Florida is the worst that our Southern States have seen since the terrible hurricane of 1900 that almost wiped out Galveston, Texas. In addition to first aid, the danger of disease is an aftermath always to be considered in such disasters. There is need always for outside help. In these catastrophes, what a wonderful comfort it is to those who cannot be of help upon the field of the devastation to know that the "Red Cross assumes charge of the relief." Then, too, the news items in the lay press that special trains of doctors, nurses, and supplies are being sent from here and there, shows that service to humanity always is our first thought and endeavor.

The services of the Medical Emergency Corps of Philadelphia were offered to heads of relief forces in Florida, by Director of Public Health Wilmer Krusen, who organized the emergency body.

THE BIG FIGHT

A world's-championship pugilistic classic was fought for the first time on Pennsylvania's soil, when Gene Tunney lifted the diadem from the brow of Jack Dempsey in Philadelphia, September 23. There were over 132,000 present, which is considered the largest attendance that has occurred in an American arena.

"Philosophers may draw all kinds of conclusions, favorable or unfavorable, from the furor, but there is one deduction which they cannot avoid. That is that the American public, given a certain range of subjects, knows what it wants, is willing to pay for it liberally, and is delighted to take its pleasure on a large scale."

The nerves of the country in general, and Philadelphia in particular, were very taut during the days leading up to the fight. But as soon as it terminated, and became a matter of ringside history, our medical confreres renewed with increasing vigor, their activities to complete all plans for entertaining the annual session of our State Society.

WANT TO BE A PHYSICIAN?

Physicians are consulted at times by friends and patients, as to what profession should be pursued by their son or some boy in whom they are interested. As a rule, it is with the idea that the physician will outline for them the pros and cons of the medical profession.

No doubt our readers will be interested in knowing that Dr. William J. Mayo has prepared an article for the *American Boy* for October, under the caption "Want to Be a Physician?"

At the 1926 annual congress of the Council on Medical Education and Hospitals, one of the speakers laid stress on the fact that there was too much loss in time and money by young men selecting as a profession one for which they showed little or no aptitude. They are misfits, and it is unfortunate that there is no way at the present time to determine previously what would be the field of endeavor best fitted to their individuality. This problem is now under discussion by certain educational bodies, and it is hoped that some day it will be possible scientifically to test

out a boy, and anticipate whether or not he will fit into a profession, and which one.

Dr. Mayo's article may be epitomized as follows: The field of medicine is not overcrowded; we need many more physicians, not specialists, but general practitioners. The difficulty lies in the matter of training. The high cost of training—in time and money—is making medicine "an aristocratic profession," eliminating young men of moderate means. This should not be so. We need country doctors. We need doctors for general practice in cities. One year, and probably two years, could be taken out of the grammar and high-school courses, thus shortening the period of time required for a medical education. The average cost of securing a course in medicine may be roughly estimated from $800 to $1,000 a year. It is possible to make all or part of the expenses, depending upon the determination of the boy. The general practitioner in the country or in the small town has a chance of making a name for himself. The instances are too numerous to mention. Research workers are wanted, but they must be of the right sort, and the right sort is rare. The average net income of the country doctor is about $3,000. The physician's reward is greater than the minister's or the teacher's, but is less than the lawyer's, but his biggest reward lies in the chance to serve—in the knowledge that he can stem or stop human suffering, mental and physical, and in the realization that it is his privilege to help other men in their worst trials. If a boy is the right sort, it should suit him fine to be a family doctor.

NURSES' HEADQUARTERS OPENED IN HARRISBURG

The Graduate Nurses' Association of the State of Pennsylvania has established a headquarters at 815 Mechanics Trust Building, Harrisburg, with Esther R. Entriken, R.N., general secretary, in charge.

Miss Entriken has been devoting her attention to the duties required in starting her executive activities, but on October 1st will issue the first number of the Association's bulletin—*Penn-Points*. At present, her office is occupied with preparations for the annual convention, which is to be held at the Benjamin Franklin Hotel in Philadelphia, from October 25 to 29, in conjunction with the Pennsylvania League of Nursing Education and the Pennsylvania Organization for Public-Health Nursing.

The Atlantic Medical Journal offers its congratulations and best wishes on this extension of the Association's activities, which is in keeping with similar action taken by other state bodies, and upon the publication of an organ which will aid in developing their profession along the best lines of modern thought. It is our hope to coöperate in all ways with the new executive offices of the Nurses' Association, for the two fields which we serve must work in unison for a happy fruition of our endeavors.

THE OLDEST HOSPITAL IN THE UNITED STATES

Dr. John Welsh Croskey, of Philadelphia, has taken up the cudgels against the continued publicity that is given in medical journals and the lay press to the effect that the Pennsylvania Hospital, Philadelphia, incorporated in 1752, is the oldest hospital in the United States. Dr. Croskey claims that in 1730 a hospital for the accommodation of the sick and insane was established in connection with what was then known as the Philadelphia Almshouse, located on a square bounded by Third and Fourth, Spruce and Pine Streets. Dr. Croskey claims that this building was without doubt the first large house or building in America for the care of the poor, the sick, the infirm, the incurable, and the insane. According to this reference, the Philadelphia Almshouse undoubtedly preceded the Pennsylvania Hospital, but its priority as a hospital probably has been overlooked because of its more familiar functioning as a home for the indigent.

HOSPITAL STRIKES

Nothing is more contemptible than a strike on the part of hospital employees, more especially when the offense is committed by interns or nurses, because they are so intimately associated with the care of the patient, and this is to be their life work. After all is said and done, it must be borne in mind that a hospital is not maintained for the staff, interns, or nurses, but for the care of the sick, and the patient must be the first consideration under all circumstances and at all times. We recall when strikes occurred on the part of interns and nurses on account of the food that was served. We were never in sympathy with an institution that had two grades of food, one for the interns, and a poorer grade and less quantity for the nurses. This problem has been solved, and no longer is a factor of discontent.

We were interested in reading in the lay press that on June 18th there was a strike of student nurses at the Galesburg Cottage Hospital, Galesburg, Ill. "Twenty-five student nurses who had been aiding in the care of forty-six patients, walked out because the hospital authorities re-

fused to pass three girls after an examination. The girls charged that a decision to raise the graduation standards was made suddenly, and that they were given no chance to retake the test, as had been the case formerly. The hospital authorities said abolishment of the training school probably would result from the strike. Graduate nurses from Chicago and Joliet acted as 'strike breakers.'"

Arbitration would have been the preferable plan. The public loses all respect for nurses who deliberately walk away from the helpless sick. There is no condoning such a procedure. Pupil nurses taking part in a strike should be summarily dismissed from the training school, and no other hospital training school should consider their application for admission. Graduate nurses on a strike should be refused further attendance upon patients in the hospital where the strike occurred.

We are not in sympathy with pupil nurses who attempt to dictate to their faculty upon matters academic or otherwise. On the other hand, executives should not be unfair in their administration of problems incident to the training school, especially on the eve of the termination of the course. We are speaking in generalities, because we do not possess the real facts of the strike here referred to, simply the details given in the press account. But even with this, it furnished much food for thought on the unwise strike.

HEALTH-SERVICE CLINIC

The question of maintaining evening dispensaries for the benefit of the sick poor, who, on account of their work, are unable to apply for treatment to dispensaries open only in the day time, is worthy of consideration in all communities. This more especially is true in view of the great field thrown open by the advocacy of periodic health examinations.

The Health Service Clinic of the Postgraduate Medical School and Hospital, New York City, inaugurated in January, 1925, an evening clinic for health examinations and guidance. Since its beginning, nearly one thousand persons have applied for its services. The field this clinic serves is made up largely of persons in moderate circumstances, such as workers, clerks, school teachers, storekeepers, and stenographers. Fathers of families who wish to safeguard the continuance of their earning power, have been numerous among those who have been advised.

This clinic is not of the charity type. A fee of $5 is charged, which is waived in needy cases. The fee, however, does not defray the expenses of the work, therefore an effort is made to restrict the service to those unable to pay the fee which would be necessary elsewhere for such examinations. The individual is referred to his regular physician for any treatment needed, except in the case of poverty, when he is referred to the proper clinic.

This altruistic work could be adopted in many communities to the distinct advantage of both the individual, who is the main consideration, and the practitioner.

PURCHASABLE HEALTH

According to an editorial in the New York Times, the School of Education of New York University, coöperating with the Association for Improving the Condition of the Poor, in conducting inquiries to ascertain how the health of school children can be improved, concludes that health can be taught successfully at little or no added expense as a part of the regular studies.

In general, the following conclusions have been reached: That a program of health education in the schools can bring about definite improvements in the practices of children in the homes, and in the practices of adults; that such a program can be carried out as a regular feature of the school work by introducing health instruction into the regular subjects; that an adequate health program can be carried out without additions to the school staff, and that the introduction of health activities as a feature of the school program increases the interest of the children in the regular school work, and helps secure better results in the conventional school subjects.

The program is not one of mere information; it covers daily practice and report. The teacher gives the instruction; the child does the rest.

THE MACHINE

For simplicity of presentation and a workable understanding of the mental and physical, scientists speak of the unit as a whole as a machine, a very happy presentation of a very complex subject in so far as the machine itself and its functions are understood.

In order to understand the machine and its mechanism, one must be familiar with its many parts and the rôle which they play in the unit functioning. The viscera and their functions are only fairly well understood, while much is yet to be learned as to their dependent and interdependent relationship. Nevertheless, sufficient is known of this relationship to justify an interpretation of the body as a whole as a functioning machine.

Human machines vary as mechanical machines, their variation being dependent on the type of material used. The old adage "blood will tell," presented in terms of eugenics and heredity, implies the bones, sinews, muscles, brain, stem, stalk, and nerves the child receives from its parents. The stability, functioning, and endurance of this inheritance depends upon the development and environment in which it operates, and the incumbent load it is to carry.

Whether or not we all agree to this mechanical interpretation, or whether it will aid us to determine for the child of today the rôle it is to play tomorrow, we cannot say; but sufficient has been produced to place a high evaluation on this conception of the body as a whole, in our approach to the study of physical and mental disease, and it would seem that the internist or specialist who sees only one diseased organ must yield to the interpretation of one visceral dysfunction upsetting other visceral functions or disabling the machine as a whole mentally or physically.

FOOT HEALTH AND STYLE

One of the large educational institutions within our state reports that flat foot sufficiently severe to produce symptoms (usually of pain in the arch and fatigue) has been found in about 22 per cent of the students, although severe cases have been found without symptoms. Other deformities are comparatively rare, although hallux varus and Morton's toe have been reported. It will be recalled, also, that there were an appalling number of men excluded from the army during the World War on account of such defects, while orthopedists tell us of the horrible foot conditions they see constantly.

Is this a necessary concomitant of modern life?

Undoubtedly there are deformities resulting from congenital conditions, from malnutrition, rickets, poliomyelitis, and other disease conditions, prevention of which would require early and general systemic treatment, but it cannot be denied that a large proportion of foot disabilities are due to ill-fitting shoes; to high, narrow, insupportive heels; to pointed or narrow toes that do not give the feet sufficient space for expansion in weight-bearing; and to short shoes that cramp the bones.

Considering the importance of foot health in relation to the general health, shoe styles may well be termed a public-health problem. Shoes should be fitted to the feet, not the feet to the prevailing mode, and there is little excuse for changing styles in lasts. Standard shapes, suited to the various physiologic types of feet, should be adopted, and an effort should be made to popularize proper fitting of shoes for health primarily and beauty secondarily after the requirements of health have been satisfied. Variety could be secured by change of material, color, decoration, etc. If it were possible to carry out this policy consistently, production of special-arch shoes would be greatly decreased.

We fail to see how a stiff arch is to benefit a foot when the primary trouble of insufficient toe room is not remedied. In fact, a great deal of harm is doubtless done by ill-advised fitting of stiff arches. A crutch is an excellent thing for the crippled; but when it is not needed, its use is detrimental. So, stiff arches, in case of real deformity, may be of inestimable value, but they should be fitted by the physician, *not* by the shoe merchant; and, when fitted to normal feet or feet merely weakened by improperly fitting shoes or lack of healthful exercise, they may do actual damage. Strangely enough, however, broad-toed shoes can scarcely be obtained except in the special-arch shoes—which almost constitutes an acknowledgment that foot troubles are often caused by cramping at the ball and toes.

Foot deformities may often be greatly benefited by proper exercises, consistently performed. Such exercises are prescribed by the Director of Physical Education in the institution mentioned above, and instructions are given the students to "consult the director or your physician before using a plate or counter to raise the arch of the foot." This is healthful advice if taken in large doses, for we are convinced that there is as much quackery in shoe fitting and shoe advertising as there is in the pseudomedical cults.

The subject should receive the consideration of the medical societies, and an effort be made to educate the general public to the proper fitting of shoes. The quickest way to reach the solution, however, would be to induce the manufacturers to bring out health-preserving rather than deforming styles. Standardization in automobiles has been found to be financially profitable, so why not in shoes? They could be manufactured more cheaply, marketed with less loss from passé styles, and would doubtless be found to be more profitable in the long run than the present system. These are the arguments that would appeal to the manufacturer. Those that should appeal to the physician are the reduction of wear and tear on patients who have to be much on their feet, the decrease in concomitant pelvic and spinal deformities, the practical elimination of corns, bunions, and painful calluses, and the improvement in general health by relief of foot discomfort and encouragement of healthful exercise.

VARIED MANIFESTATIONS OF DISTURBED CALCIUM METABOLISM

There is a group of diseases whose outward manifestations would not seem to indicate any relationship, but in which recent studies have given reason to believe there is a common underlying factor. This group includes rickets, spasmophilia of various types, tuberculosis, and possibly some other more or less obscure conditions.

Studies have been published in this Journal, pointing out that rickets is due to a deficiency of either calcium or phosphorus, or to an imbalance of the two substances, and their administration is a common treatment in this disease. Cod-liver oil and ultraviolet light have for some time been recognized as specifics, but only within the past few years has it been known that the vital factor in cod-liver oil is ultraviolet emanations. It, therefore, becomes apparent that the actinic rays are regulators of the calcium-phosphorus metabolism.

Tetany following excision of the parathyroid glands is a common experimental phenomenon, and is relieved by administration of the gland substance. It probably develops only in the presence of some degree of hypoparathyroidism. The symptoms are reported to be due to a lowered calcium content of the blood, and the association of this disorder following rickets is suggestive of possible good from parathyroid feeding in the latter disease.

There is a growing tendency to associate other types of spasmophilia with a calcium deficiency, and in a recent issue of this Journal it was pointed out that administration of calcium chlorid is one of the most effective methods of treatment in pylorospasm. Laryngospasm, cardiospasm, possibly chorea, and other spasmodic manifestations appear also to be related. No report of treatment by parathyroid feeding or exposure to sunlight in these disorders has as yet reached the writer, however, except in postoperative tetany.

It is worth noting here that Japanese investigators have reported a reduction in the healing time of fractures by administration of parathyroid, due to an increase of blood calcium. Other workers have also described the great benefit of exposure to sunlight in fracture cases.

It was at one time thought that the discovery of the tubercle bacillus would solve the problem of the etiology and cure of tuberculosis, but up to the present time, no specific has been found which will destroy the bacillus without damage to its human host. In this, the infection of tuberculosis seems unlike many other infections—that of the spirochete, for example, which may be eliminated by chemical means, or the acute infectious diseases, which may be combated by the formation of antibodies. The only treatment for tuberculosis that has been found efficacious is that of building up the human system, and the implication is that tuberculosis is an infection superimposed upon a condition which has prepared the tissues to receive it. The agents most effective in this building up of the system have been found to be rest, mental and physical, abundant nutritious food, and ultraviolet light emanating either from the sun, from artificial illumination, or from radioactive agents, such as cod-liver oil. Just recently, parathyroid administration in pulmonary tuberculosis and some other lung affections is reported to control certain of the symptoms, notably hemorrhage.

The fact that ultraviolet light and the parathyroid hormone seem in some manner to control the calcium and phosphorus metabolism would apparently point to a breakdown of this process in the etiology of tuberculosis. That such is the case in bone tuberculosis there is little doubt, and the value of studies of the blood calcium and phosphorus in other types of tuberculous conditions would appear to be evident.

Just why a deficiency of these substances should result in one case in tuberculosis, and in others in rickets or spasmophilia, has not been revealed at the present time. Further studies are indicated in this very interesting and important group of diseases, and it is hoped that this editorial may prove sufficiently suggestive to stimulate general observations looking toward a solution of the problem.

There is evidence that the condition is hereditary. An interesting illustration is the following family history: A mother died of pulmonary tuberculosis, leaving a young child who developed a bone tuberculosis which was unsuspected by the family and healed spontaneously, probably due to good food and an outdoor life. The condition was discovered only after she had borne a child, who for many years was affected by laryngospasm which was benefited by exposure to sunlight. It seems quite possible that the three cases were different manifestations of the same hereditary deficiency.

That there is some relationship between the parathyroid hormone and sunlight is evident from their similar clinical effects, but much yet remains to be done in order to determine in which cases parathyroid administration may be valuable, which may require calcium and phosphorus medication, and which would best be treated by diet and sunlight alone.

JOTS AND TITTLES

Scientific Notes

Two scientists speaking recently before two different scientific bodies have both expressed the belief that cancer is a group of diseases. Dr. William S. Bainbridge, formerly chief surgeon at the Brooklyn Naval Hospital, told the American Academy of Physiotherapy that multiple ailments, each sustained by the other, were the basis of all cancer, and that attempts to eradicate it as one disease were useless. Dr. James Ewing, professor of pathology at Cornell, declared before the International Cancer Control Symposium at Lake Mohonk, N. Y., that cancer is not a single pathological entity, but a great group of diseases of very varied origin and course. While dietary or hygienic measures do not contain a panacea for cancer, the disease is activated by irritation, and "a certain intelligent reformation of the habits of the race must be accomplished before cancer prevention can show very tangible results."

In a paper published in the August number of the *American Journal of Ophthalmology,* Charles Goulden reports the success obtained at Moorefield's Hospital, London, in treatment of ocular tuberculosis by the ultraviolet ray. The ray is applied locally by a rod through which the rays are concentrated on the affected part. More than 100 persons had been treated prior to the report, with very satisfactory results.

According to Dr. George Tischler, director of the Botanical Institute at Kiel, Prof. George Harrison Shull, of Princeton University, has "discovered the key to the major problem that has confronted genetical scientists for three decades.....That problem was how to localize the character of the evening primrose in the plant cell." Now that this key is found, the science of heredity will make a great forward step, for the same principles apply to both plant and animal heredity. Publication of a full report of this work is promised in the near future.

Dr. Howard A. Kelly, of Baltimore, working in conjunction with Louis C. C. Krieger, artist and student of mycology, has completed one of the most extensive collections of lore concerning fungi to be found in this country. His herbarium contains more than two thousand specimens collected in all parts of the country. A library of ten thousand titles—books and pamphlets—has been collected by Dr. Kelly in the course of his study. More than four hundred water-color plates illustrating Dr. Kelly's collection, and reproducing in natural colors the beauties which exist among the fungi, have been prepared by Mr. Krieger, and are unsurpassed by anything of the kind in the United States, even the previous collection which he painted for Harvard University, and which is kept under lock and key in the botanical laboratory there.

Public Welfare

Plans are under way for the nineteenth annual sale of Christmas seals by the National Tuberculosis Association. The work of this association is financed by the sale of these seals, and has helped to cut the death rate of tuberculosis by more than half. To think that one can have a share in the saving of some 110,000 people annually is an inspiration to purchase liberally of these little messengers of cheer.

Is it right to permit the sentencing of law violators to punishment that will be detrimental to their health? The bread-and-water sentences of Judge Bryant, of Arlington, Nebraska, have aroused bitter discussion in his section of the country, and have been termed both harmful and cruel. While man can subsist for a longer term than ten days (his maximum continuous sentence) on nothing but water, it is questionable whether in malnourished individuals the carrying out of such a sentence might not do considerable damage to health. And, in fact, the whole idea is wrong. Improper nutrition has been proved to induce criminal tendencies in rats that show normal characters with proper diet. If in rats, why not in humans? Furthermore, punishment has been a dismal failure in preventing crime. The object of the courts should rather be the rehabilitation of the law breaker, and his physical and moral upbuilding, so that he will be better fitted to carry on a normal life after his release from restraint. All sentences should be indeterminate, and discharge should be contingent on the reform of the prisoner. Lacking this, he should be restrained indefinitely under the best obtainable conditions, not as a punishment, but as a protection to the community. Our whole attitude toward crime must be revised if effective methods of handling it are ever to be adopted.

The United States Chamber of Commerce and the Life Underwriters Association and allied organizations are coöperating in a new health drive looking toward the prevention of disease and decrease of the mortality rate.

Colonel Carmi Thompson, who made a visit to the Philippine Islands as an observer for the Coolidge administration, reports that the Philippines are held back by the toll of tropical diseases. The prevalence of malaria, dysentery, and leprosy is attributed in a large measure to the native ignorance of sanitation. Although malaria and cholera have been stamped out in the Manila district, these two diseases are responsible for a high morbidity throughout the islands in general. Malaria is the most vicious of all diseases, because of the disability it causes. Men affected with its chronic form are able to work only about two days a week. Tuberculosis, dysentery, and leprosy shorten life, seriously weaken the man power, and increase the infant mortality. On one of the islands it is estimated that a fifth to a quarter of the 11,000,000 population are unable to carry their share of the work. While the steady opposition of the Filipino politicians is directed to discredit Governor General Wood, the local health authorities seem to be incompetent, and success in combating disease is being obtained only in those sections where American sanitation experts have been on duty.

An organized drive against the smoke nuisance is being conducted in Philadelphia. It is a subject in which physicians should be vitally interested, since it has reached the proportions of a health menace, more especially in our large cities. And not alone should the products of coal combustion be attacked. The fumes from gasoline engines provide a problem of sizable proportions which should be considered in conjunction with other aspects of the subject.

Gustav Charpentier, the composer, has headed a league in France which has denounced stiff collars as being as dangerous to men as are corsets to women. Constant compression of the neck nerves and muscles, they declare, has been found definitely injurious. We are for anything that will help to increase the health and well-being of the population. Who speaks to start an anti-stiff-collar league here?

In an effort to eliminate just criticism, a committee of the American Psychiatric Association has taken up the question of alienists as trial experts. This committee has suggested that the presiding judge appoint a neutral expert from a list furnished by the

Association, who would be paid by the State, thus insuring more unbiased testimony than under the present system which permits the employment of alienists by the opposite sides of the case. The committee has also suggested the substitution of curative treatment of criminals for prison punishment, and the appointment of resident psychiatrists in courts and penal institutions. Others have suggested confinement of the defendant whose plea is insanity for thirty days in a State hospital, so that he may be under observation by the State's experts. This movement for reform deserves the support of the entire medical profession.

A NATIONAL PROGRAM for the prevention of maternal mortality and morbidity throughout the United States is outlined by the Children's Bureau of the U. S. Department of Labor in a report on maternal mortality recently made public. This report, the work of Dr. Robert Morse Woodbury, formerly director of statistical research for the Children's Bureau, brings together and analyzes all available material, both American and foreign, on deaths of mothers during childbirth, and is considered one of the most important pieces of recent research in the field of the Bureau's work.

Maternal mortality rates in the United States are today among the highest in the civilized world. The significance of these facts from a national point of view is found not only in the loss which this means of the lives of women presumably in their prime, but also in the far-reaching effect of maternal mortality on the infant death rate.

"A very considerable proportion of all deaths of infants under 1 year of age occur during the first month of life from causes which have their origin in the care and condition of mothers during pregnancy and confinement. In the United States as a whole it may be estimated that approximately 100,000 stillbirths occur each year. The same measures which will safeguard the lives and health of mothers during pregnancy and labor will also tend to reduce the stillbirth and neonatal mortality rates."

Comparison of the United States rates with those of other countries shows that the United States ranks among those having the highest rates, such as New Zealand and Chile. Among the countries having rates less than half that of the United States are Denmark, Finland, Italy, Japan, the Netherlands, Norway, Sweden, and Uruguay.

Analysis of the causes of maternal deaths in this country shows that the most important single cause is puerperal septicemia. Cities showed a higher maternal mortality rate than rural districts in the United States, but to some extent this difference is to be accounted for by the fact that many of the more difficult or complicated cases are brought from rural regions into cities in order to secure the better medical and hospital facilities of the city.

"Almost all the mortality from puerperal septicemia is preventable," the report states. "Puerperal septicemia is infectious in origin, and its prevention depends upon the rigorous observance of asepsis. The Australian committee appointed to study the causes of death and invalidity in the Commonwealth states 'Puerperal septicemia is probably the greatest reproach which any civilized nation can by its own negligence offer to itself. It can be prevented by a degree of care which is not excessive or meticulous, requiring only ordinary intelligence and some careful training.'"

For the prevention of the most important causes of maternal deaths the essential recommendations by the Bureau are: Effective supervision by a public-health agency over hospitals and over the training and admittance to practice of physicians, midwives, and nurses, and the requirement that all cases must be reported, as in the case of other infectious diseases.

Educational Activities

VISCOUNTESS ERLEIGH, daughter-in-law of Lord Reading, at one time High Commissioner and Special Ambassador to the United States, realizing the need of educated mothers for expert help in the rearing of their children such as is available to the mothers of the slums at the child-health clinics, has organized a course of lectures by eminent London specialists that are said to be among the most fashionable events today in the British capital. Not only the mothers, but the fathers, grandmothers, teachers, and nurses attend, and so much interest has been aroused that Lady Erleigh's advice has been asked on how to start the same thing in America. This demand for knowledge provides a wonderful opportunity to further the public health, if our medical profession rises to the occasion.

"THE GAIN OF AN INCH IN HEIGHT and a corresponding gain in weight may be looked for in the next generation because of our much better diet habits," asserts Dr. Samuel J. Crumbine, general executive of the American Child Health Association. This gain, however, will not be entirely the result of better diet habits alone. It will be assured only by a general regulation of all the activities of our boys and girls. Realizing the importance of health and the need of adequate instruction in order to maintain it, a number of the public schools of the country have been putting in courses in health education. Thirty-five thousand pupils in the seventh and eighth grades in Philadelphia are now offered such courses, and Harrisburg has installed a system that is meeting the commendation of educational experts throughout the country. We predict rapid development of the idea within the next few years.

TEN TO TWELVE PER CENT of all school children in Philadelphia are afflicted with some form of speech defect, according to Mrs. Serena Foley Davis, who is in charge of speech-correction work in the local public schools, and during the summer is conducting a special course in the summer session of the Teachers' College of Temple University for teachers interested in that work. To remedy the present condition in the city's schools, special speech-correction classes are conducted during school months in sixty-six public schools and at the Philadelphia Normal School, where it has been found that many persons preparing for careers as school teachers are also thus afflicted. During the past year 682 serious cases of defective speech were corrected entirely in the Philadelphia Public Schools. The advantages of the system, which was introduced by the Board of Education in January, 1922, are enormous. Prior to the introduction of the special work, children suffering from speech defects were left behind, or held back. Today these pupils progress normally, like other children. A feature of the Temple course is a speech-correction clinic, conducted by Mrs. Davis, every morning between 10 and 12 o'clock. Hundreds of parents bring their children to the clinic, which has the twofold purpose of correcting the youngsters' speech disorders and teaching the summer-school students the practical phases of the work at first hand. Speech defects, according to Mrs. Davis, may be classified in five groups, as follows: stammering and stuttering, lisping in various forms, lalling, nasality and other voice defects, defective phonation, including so-called "baby talk," and acute foreign accent.

A School of Tropical Medicine of the University of Porto Rico has been established in coöperation with Columbia University. The sum of $100,000 was provided from the University's building fund, and the new school has been equipped with a building of its own, with laboratories of bacteriology, chemistry, mycology, pathology, and parasitology, each capable of accommodating from ten to fifteen students.

Taking another step toward the goal of eliminating "educational waste," University of Pennsylvania authorities have announced the appointment of Dr. Robert A. Brotemarkle, psychologist, to the newly created post of personnel officer, in which capacity he will serve not only as student adviser but also as technician to the dean of the college, Dr. Robert Belle Burke. Educational waste is time and effort spent on students who ultimately drop out of college because of deficient scholarship or other causes which frequently can be prevented. In his new capacity, Dr. Brotemarkle will try to discover the outstanding defects and particular abilities of students requiring special attention, and to give to each individual case thoroughly scientific treatment from the psychological and other angles. Among students who fail, a large proportion give every evidence of possessing all the capacities of intelligence and intellect necessary to profit by a college education. These students fail for other reasons. Lack of application, lack of knowledge of how to study, ill health, financial difficulties, social maladjustment, and excess time devoted to extracurricular activities are among the factors.

Medicolegal

Don't forget to vote at the election on November 2d. It is only by consistent and persistent voting that the profession can retain its influence in legal and governmental matters.

In the suit reported in this Journal last month to prevent the State from paying to St. Agnes' Hospital, Philadelphia, the sum contracted for by the Welfare Department in return for service rendered to the poor of the Commonwealth, Judge Frank B. Wickersham has rendered a decision that the hospital is a denominational institution conducted by the Catholic Order of the Sisters of St. Francis, and cannot constitutionally receive any State appropriation. To quote from his opinion: "It is an untenable position that public funds may be paid out to help sectarian institutions provided only that such institutions shall render a *quid pro quo* for the payments made to them. The Constitution declares against using the public funds to aid any sectarian institution independent of the question whether there is or is not a consideration furnished in return for the funds so appropriated." The Court did not pass upon the constitutionality, as such, of the lump-sum appropriation. It is reported that an appeal will be made to the Supreme Court by the Attorney General's office from the portion of the decision relating to the right of the Welfare Department to contract for payment to hospitals for free service from the million-dollar lump-sum appropriation, and that Deputy Attorney General William A. Schnader will handle the State appeal. The hospital, it is said, will also appeal.

To constitute the loss of the use of a hand, the member must be useless for all practical purposes, and it is not enough to be unable to perform the same work as formerly. When the palm is uninjured and the thumb and index finger remain, evidence of a loss of 60 per cent of the use, automatically, does not constitute the loss of the member. Under the evidence in this case, the hand is still useful for many purposes, and the handicap suffered should not be the controlling factor. This is the essence of a decision rendered by the Superior Court in the case of Frank Gorman *vs.* American Metal Company in reversing the decision of the Common Pleas Court of Philadelphia and the Workmen's Compensation Board in awarding compensation to the claimant.—*Pennsylvania Progress*, August, 1926.

A Constitutional amendment, which should be of interest to the profession, will be presented for repassage in the 1927 Legislature, and if carried will later be voted on by the people. An act passed in 1923 providing for a pension of one dollar per day for all indigent persons over the age of 70 years, upon compliance with certain provisions such as length of residence in the State and total dependency, etc., was declared unconstitutional by the Supreme Court. Its proponents now intend, according to *Pennsylvania Progress*, the organ of the State Chamber of Commerce, to legalize it by inserting an amendment in the State's Bill of Rights by authorizing the legislatures to appropriate money from the public funds for this purpose. This amendment was passed in the session of 1925, and will again be considered this year. The Chamber of Commerce estimates that it would cost the taxpayers of the State from $40,000,000 to $60,000,000 annually. Those who favor an old-age-pension system base their advocacy upon the criticism and condemnation of almshouses as conducted in this State. *Pennsylvania Progress* questions the validity of this argument, and urges that candidates for the Legislature be put on record before their election on November 2d.

Health certificates furnished by osteopathic physicians, on blanks supplied by the Department of Public Instruction, should be received by the Department as the basis for granting teachers' certificates, W. Y. C. Anderson, Deputy Attorney General, held in an opinion, September 22, to Dr. Francis H. Haas, Superintendent of Public Instruction. The opinion points out that so long as the physician is under authority of the State Board of Osteopathic Examiners, his authority with regard to subjects of public health is the same as that of physicians and surgeons of other schools.

Medical Literature

The 1925 report of the National Committee for the Prevention of Blindness presents a summary of the remarkable work done by this organization, including conferences, research, field work, sight-saving classes, legislation, and educational activities. During the year, the Committee conducted what is believed to be America's first preschool eye clinic, at which 50 per cent of the children attending—all under seven years of age—had some eye ailment. The Committee's survey of 5,000,000 school children shows that approximately 12 per cent have such seriously defective vision as to be handicapped in their school work. Registration of schools for the blind shows that only 11.5 per cent of the pupils had been blinded by ophthalmia neonatorum—a striking evidence of the success of preventive work, as eleven years ago the percentage was 28.

The first issue of *Children*, a magazine for parents, has been received, and its editors are to be congratulated on the interesting and edifying contents. The staff includes many eminent men and women who have long been interested in child welfare, and it will have the coöperation of the leading educational and child-welfare agencies, private, public, and governmental. *Children* can be recommended highly to the fathers and mothers who want to do a good job in the raising of their

family. It is well worth the $2.50 for a yearly subscription.

The Lancaster City and County Medical Society has provided its *Bulletin* with a new dress. The cover design is most attractive, and was drawn by Miss Caro Crosland, of Lititz—a sister of the *Bulletin's* business manager. The staff will endeavor to make the publication more than a mere calendar of meetings, and will encourage original articles by members of the Society, and solicit advertising.

The Association of American Medical Colleges, 25 E. Washington St., Chicago, has recently begun the publication of a quarterly *Bulletin* of the Association. It is an endeavor to supply a long-felt need for the dissemination of news of interest to medical colleges, and will be distributed free.

What is said to be the first comprehensive history of the activities of the medical profession from the earliest times to the present day is about to be published through the efforts of the Physicians Home, Inc., the headquarters of which is in the Times Building, New York City. The work, under the title "A History of the Physician," is in five parts, edited by Arthur Selwyn-Brown, and will contain biographies of outstanding practitioners since classical times, as well as of prominent American physicians of the past century. The proceeds from subscriptions are to be devoted to increasing the endowment fund of the Physicians' Home. The nominal price is $15, but subscriptions as large as $500 have been received.

PUBLIC HEALTH

An Enviable Record.—Three years of toxin-antitoxin work show good results. Dr. Charles K. Skinner, health officer of Hudson, N. Y., informed the State Health Department in June, 1926, that there had not been a case of diphtheria reported in that city during the preceding twelve months. Toxin-antitoxin inoculation of school and preschool children has been carried on in Hudson annually since 1923. Such an enviable record speaks for itself, and is worthy of emulation.

What Osler Said About Vaccination.—I will go into the next severe epidemic of smallpox with ten selected vaccinated persons and ten unvaccinated persons. I should like to choose the latter—three members of parliament, three antivaccination doctors, if they could be found, and four antivaccination propagandists. And I will make the promise neither to jeer nor to jibe when they catch the disease, but to look after them as brothers, and for the four or five who are certain to die I will try to arrange the funerals with all the pomp and ceremony of an antivaccination demonstration.

Prevention of Blindness.—Mrs. Winifred Hathaway, Associate Director of the National Committee for the Prevention of Blindness, will soon return from England, where she has been studying British methods of maintaining sight-saving classes in the public schools for children with seriously defective vision. She has visited such classes in London, Edinburgh, and other cities, and conferred with the authorities of Great Britain who were instrumental in the establishment of the first of these classes.

According to Mrs. Hathaway, there are approximately 250 sight-saving classes in America, while there should be at least 5,000. We have only recently begun to realize that the sight of many of the men and women who are blind today might have been saved if there had been available for them in childhood sight-saving classes such as the more progressive school systems now maintain. Even now, because of the absence of such classes, thousands of children with partial vision are being sent to schools for the blind or are being wholly deprived of education because of their inability to keep up with the work of the ordinary school classes.

Mrs. Hathaway, who has been associated with the National Committee for the past ten years, has probably brought the need and methods of safeguarding sight to a larger number of persons than any other man or woman in America. She has addressed hundreds of audiences of parents, teachers, and children on this subject, has given courses for the training of teachers of sight-saving classes in New York University, the University of Cincinnati, Peabody College, and scores of normal schools, and has taken an important part in the national campaign for the prevention of blindness and the conservation of vision.

Activities of the Pennsylvania State Department of Health.—A report received from the Department's Bureau of Engineering indicates that the motorized laboratories engaged in the highway water-supply work covered 2,700 miles and examined nearly 2,000 supplies. Over half of these were rejected. In view of the large number of rejections, the Health Department urges the traveling public to use discrimination in quenching their thirst, and to drink only from the supplies marked with the safe-water placard and thus avoid the possibility of contracting typhoid fever through the use of contaminated water.

Two motorized milk laboratories, under the direction of the Department, are at present making an intensive investigation in Allegheny County of all pasteurizing plants and farms where raw milk is sold direct to consumers. This involves the rural sections as well as 99 separate municipalities. Recommendations based upon the findings will then be made to the local boards of health or officials interested.

The Department has announced a plan to establish rural tuberculosis clinics in the counties of Adams, Cumberland, Franklin, Fulton, Perry, and York. These clinics will be operated between now and early winter, and will have the coöperation of the local physicians in the respective counties as well as the physicians attached to the various State tuberculosis clinics in those localities. Dr. Custer, deputy superintendent of Mont Alto Sanatorium, will direct the work.

Delaware County's Sewage-Disposal Problem.—Virtually the whole of Delaware County is facing the stupendous problem of sewage disposal in view of the pressure of the State Department of Health upon the different boroughs and townships as well as the city of Chester to take proper care of their sewage. After many years of effort, the State authorities finally have induced the Chester City Council to make a start on the solving of this problem, and within three years it is expected that the city will be disposing of its sewage in a sanitary manner. Now the Department of Health is turning its attention to the smaller municipalities.

Safeguarding Iodin Prophylaxis and Treatment.—Iodin in the form of Lugol's solution has been advocated as a temporary therapeutic measure in the treatment of exophthalmic goiter, in order that a patient may be brought into a satisfactory condition for operation. Since this procedure has been advised, Lugol's solution has been used in the treatment of thyroid affections in which such medication has plainly been contraindicated. Consequently there have been numerous untoward and even disastrous results, causing widespread

but unjustifiable condemnation of iodin as an agent in the prevention or treatment of all forms of goiter.

In view of the recently reported ill effects following iodin prophylaxis and treatment, it behooves those engaged in antigoiter activities not only to prescribe iodin in appropriately minute quantities, but also to be certain that it is actually indicated. It is just as important to know when to withhold iodin as when to administer it. Therefore, unless skilled treatment is available, it is better withheld. Obviously, skillful treatment of thyroid conditions falls within the province of the specially qualified rather than the general practitioner. Regarding the use of this drug, Plummer says: "The danger of giving iodin should be stressed. We have no reason to think that Lugol's solution is ever detrimental in cases having exophthalmic goiter. Lugol's solution always benefits patients when that part of the complex which characterizes the disease is present; namely, the peculiar nervous phenomena and the stare."

American Public Health Association Annual Meeting, Buffalo, N. Y.—The fifty-fifth annual meeting of the American Public Health Association will be held in Buffalo, N. Y., October 11-14 with the Hotel Statler as headquarters. The program excellently reflects the present-day problems in the public-health field. Milk pasteurization and control, ventilation, measles, rural hygiene, and pollution of boundary waters are some of the subjects that will receive particular attention in special sessions or in the sessions of the nine sections of the Association (Public Health Administration, Laboratory, Vital Statistics, Public Health Engineering, Industrial Hygiene, Food and Drugs, Child Hygiene, Health Education and Publicity, and Public Health Nursing).

The program promises to furnish stimulating discussions of moot questions, and the first announcement of several new investigations and studies. There will be special sessions on mental hygiene, teaching of health in colleges, and two full half-days will be devoted to the subject of providing a safe milk supply. The program this year will be an unusually large one, thirty-five sessions having been scheduled. The meeting will close with a special dinner session on health demonstrations in the United States. This will be followed on the succeeding day by a trip to the demonstrations in New York State.

The regular annual conference of New York State Health Officers and Public Health Nurses will be held in conjunction with the American Public Health Association meeting, and this group will present a separate program on October 12.

The proximity of Niagara Falls with its many features of general and scientific interest will make the entertainment features of this annual meeting unusually attractive and an exceptional opportunity will be given to delegates to the meeting to visit places of scientific interest in Buffalo and Niagara Falls.

Members of the Association and their families will receive a 25-per-cent reduction in railroad fare traveling to and from the meeting. Nonmembers may make application for reduced fare to Mr. Homer N. Calver, Executive Secretary, American Public Health Association, 370 Seventh Avenue, New York City. The Secretary will also gladly furnish additional information regarding the meeting and the program.

A hundred and forty speakers are listed on the program, among whom may be noted: C. E. A. Winslow, Dr. P.H., Irving Fisher, Hollis Godfrey, Ph.D., Livingston Farrand, M.D., L. I. Harris, Md., W. S. Rankin, M.D., Frederick L. Hoffman, LL.D., A. J. McLaughlin, M.D., Jesse F. Williams, M.D., H. C. Sherman, Ph.D., W. H. Park, M.D., Sally Lucas Jean, Herman N. Bundesen, M.D., Haven Emerson, M.D., L. I. Dublin, Ph.D., John A. Amyot, M.D.

HOSPITAL ACTIVITIES

Charges for Fans.—Whether or not it is advisable to charge extra for the use of electric fans during hot weather is a debatable question in at least one hospital. One would imagine that it would be much better for the hospital to furnish fans without charge in cases where they were of great necessity, for this practice undoubtedly would develop good will and friendship that would repay the hospital many times over for the expense involved.—*Hospital Management.*

A Way to Reduce Noise.—A hospital in an Eastern state recently purchased refrigerator boxes for cracked ice, and in commenting on this called attention to the fact that these receptacles permitted the use of a power pressure instead of the former noisy and wasteful method of chipping the ice by hand on the different floors. Another disadvantage of the latter method was that the noise was annoying to patients, especially at night. So well pleased is the hospital personnel with the two boxes that more have been ordered for the remaining floors. This hospital reports that it is not unusual to have about 20 ice bags in use on one floor in addition to other demands for cracked ice.—*Hospital Management.*

Why the Annual Report.—*Hospital Management* occasionally is asked to comment on annual reports by superintendents who are anxious to profit by suggestions and criticisms and improve future editions. As a general rule there is one common fault of a great many reports, and that is that they are not designed for any particular group. Frequently a few oft-used illustrations, a list of trustees, benefactors, and hospital personnel, a few pages of statistical matter concerning the operation of the hospital, and a long list of diseases and conditions treated comprise the report. For active friends and medical men, such a report will have interest because they will be able to interpret the figures, but for the public, particularly influential individuals and organizations whose support is helpful, the report is just as meaningless and technical as the most scientific discussion of, say, the Einstein theory. There is an increasing number of hospitals that are issuing reports with a definite goal in mind, such as the presentation of the professional work of the hospital to the medical profession, or the interpretation of the service and needs of the institution to the public. As one can easily imagine, either of these reports would be quite different from the other, and it also is easy to picture how ineffective and wasteful would be a report that tries to present three or more entirely distinct phases of hospital work to as many different groups, under one cover.

A Warning That Should Be Heeded.—The American Hospital Association recently received a letter from a hospital trustee calling attention to a serious accident that resulted from a "homemade" incubator, the electric light of which set fire to bed clothing and burned a baby so badly that it will be a permanent cripple. This trustee suggests that other hospitals be warned of the danger of using "homemade" equipment of this kind, adding that a brief investigation has indicated that a number of institu-

tions make use of such devices. This is a warning that should be heeded by every hospital, and it applies to a number of other "homemade" devices that are in daily use. It is well to encourage ingenuity and inventive skill in the improvement of equipment, and economy has a prominent place in every hospital, but these qualities should not be developed without due appreciation of dangers that may accompany them. Electricity, heat, fire, steam, etc., will destroy if they are not completely mastered, and a piece of string here, and a rubber tube or a nail there, certainly are not assurance against accident. Of course, it is easy to see what might have happened, after it actually has happened, but a person employed in one line cannot be expected to foresee eventualities, especially as he has one major object in view in rigging up a device whose principal virtue is that "it will answer the purpose nearly as well" as a manufactured article costing many dollars more. With this latest tragedy in mind, it would be a good thing for every hospital to check over all its "homemade" equipment with a view to seeing that each article is as safe as it can be, always remembering that those devices used in connection with patients' treatment may not be watched by a person ill or in pain with the same thoroughness that can be expected of a well person. Equipment made by manufacturers of long experience costs more than a device constructed of odds and ends designed for other purposes, but, as the advertisements say, "It costs more—and it's worth it."—*Hospital Management.*

Mental and Physical Disease.—During the past few years we have begun to consider that the problem of the treatment of mental as well as physical disease rests with the general hospital. If we are to do justice to the care of mental illness, it is up to the general hospital to open its doors to the mild mental cases of the community. It is the general hospital's duty to hold clinics and to provide adequate facilities and trained psychiatrists to carry on this work.—*Modern Hospital.*

Is the Nursing School Keeping Pace With Public Demands?—The needs, possibilities, and ideals of nursing education are all recognized in this comprehensive analysis of the nursing problem. The tendency of certain institutions to offer less than a three-year course and to lower the standards of nursing education by exploiting student nurses for the hospital's economic benefit, through the old apprenticeship method is denounced. The grading of schools and the creation of a minimum standard in order to bring about uniformity and place nursing schools on a sound educational basis is advocated. The opportunities for the large schools to develop through centralization and affiliation into schools that offer an adequate program of education in all types of nursing is possible.—*Modern Hospital.*

Team Work.—Team work counts. In cities where more than one hospital is found, success for all follows the whole-hearted coöperation of every institution. It means the elimination of misunderstanding at all times and the promotion of efficiency, particularly in an emergency. The aims and objectives of all should be the same and are the same if the hospital is worthy of its mission. No differences should be allowed to creep in, no matter how small, because it is from these small beginnings that antagonisms grow. The relations of one institution to another should be of the friendliest kind. The strong should help the weak, and all should strive continually to raise the standards of administering to the sick and injured. There is no place for ulterior motives in this work; there is no place for selfishness or intolerance.—*Modern Hospital.*

Evening Course.—The evening course in hospital and institutional management at Temple University, Philadelphia, began October 7. Classes will be held each Thursday night from 7:30 to 9:30 for 30 weeks, and the same corps of lecturers will conduct the course who assisted Charles S. Pitcher, superintendent of the Presbyterian Hospital, last winter. Mr. Pitcher will again be in charge of the class. The summer course shows a widespread interest on the part of hospital executives in increasing their knowledge of institutional procedures through intensive study. Half of the enrollment is from Pennsylvania, and the other half from California, Michigan, New York, Massachusetts, and New Jersey. Among those enrolled are superintendents of general hospitals, superintendent in the Indian Service, superintendent of an orphanage, directress of nurses, instructress of nurses, hospital supervisor, and charge nurse. There have now been three summer courses and the winter course of 1926-27 will be the fourth winter course.—*Hospital Management.*

Considerations in Enacting or Amending Industrial Laws.—The literature on workmen's compensation acts as relating to hospitals which is developed by the hospital associations and by the hospital magazines is comprehensive, and if to it is added existing legislation on this subject, there is practically nothing new to be said. The theory of workmen's compensation is that the cost of occupational diseases and injuries shall be borne by industry. It is just as much a legitimate item entering into the cost of a finished product as are the cost of raw materials, the repairing of machines, and the wages of the workers, and industry is rapidly recognizing it as such. When it is explained that the law in Pennsylvania, for instance, provides for only part of the cost of the care of an injured worker and that the remainder of the cost must be paid out of hospital funds which would otherwise be used for taking care of the sick poor, we find everybody agreeing that the practice as existing today is wrong and should by all means be corrected. The labor unions are primarily interested in adequate compensation for the worker and his family while he must lose time.

The industries usually oppose compensation or increases in compensation because the insurance companies will be obliged to increase their rates and the cost of manufacture will thereby be greater. It seems a fair statement that if the insurance rates for compensation are practically the same in all states for the same industries, all will have the same cost on account of it and there will be no unfair competition. It is strange that the insurance companies usually oppose increases in compensation. When representatives of liability insurance companies are questioned regarding their objection they say that it increases the cost of insurance. This hardly seems sound if the state law requires all employers to carry insurance. The only exception to this requirement should be very large employers who can convince the compensation commission that they can meet the conditions necessary for carrying their own insurance. It is also customary to eliminate from the provisions of workmen's compensation acts farm employees and domestic servants.

There should be a provision in the law that the bill of the hospital for service rendered the employee shall be paid within a specified time. It is felt that sixty days from date of presentation of the bill would be adequate to establish any facts and make payment. The

hospitals have no legal standing under the Pennsylvania act, and are not permitted to protest any ruling. In enacting or amending workmen's compensation acts it is very important to be sure that provision is made for legal standing of the hospitals before the commission. The hospitals of Pennsylvania have no right to appear before the board, and therefore must take action through the patients. This is most unsatisfactory, and seldom gets results. It has caused a great deal of unkind criticism of the board which could have been avoided by the insertion of one or two sentences in the law and without increasing the cost to the employer.

Briefly, some of the main points to keep in mind in enacting or amending a workmen's compensation act in so far as it applies to hospitals are: Financial compensation equal to cost to the hospital. Length of time during which payment shall be made to depend on the requirements of each case as decided by the physician having charge of it. Hospital service to include care of bed or in-patients in the general wards or private departments, and first-aid and out-patient or dispensary care for ambulant patients, with additional charge for laboratory and x-ray examinations, serums, vaccines, and mechanical appliances if these are charged extra to other than compensation patients in the same or similar departments of the hospital in question. Legal standing of the hospitals before the compensation commission. Payment of hospital bills automatically without the necessity of court action, the employment of counsel, or other similar procedure. The law should cover all gainfully employed persons in the state, with the possible exception of farm and domestic employees. All employers coming under the act should be required to carry insurance with an insurance company or the state insurance fund or be self-insurers. Such an act should be simple, clear, and brief, to avoid, so far as possible, conflicting interpretations which almost invariably result in volumes of rulings and decisions that add to the confusion. An act to work satisfactorily must have proper consideration for the interest of all concerned—the employee, his family, the physician, the hospital, the employer, and the carrier.—*Hospital Management.*

INDUSTRIAL MEDICINE

New Occupational Diseases from Radio-active Substances.—This is the leading article in a recent issue of the *Journal A. M. A.* Case citations, illustrations, and tables are given. The authors describe a hitherto unrecognized form of occupational poisoning. The anemia present is actually proved to be due to the ingestion of radio-active elements which have produced exhaustion of the blood-forming tissues. Necrosis of the jaw bones is the local type of injury produced, complicated by increased bacterial action. It is believed this is the first time that radio-activity has been demonstrated in the human body during life by means of electrometers. In the organs after death the presence of radium, mesothorium, and their decayed products were found in the lungs of a chemist and physicist who had died of an acute leukopenic anemia of the pernicious type. The electroscope or electrometer demonstrated radio-activity in the expired air of the victims. In one individual, even after 4 years, a large amount of emanations in the exhaled breath was demonstrable. After radio elements are once deposited in the body, there is no known way of eliminating them. It takes radium 1,750 years, and mesothorium 6.7 years to reach one half of their original activity. Five known deaths have occurred. It would appear that intravenous injections of radio-active substances are also highly dangerous, except the short lived emanations.—Martland, Conlon, and Knef, *Jour. A. M. A.*, 85, 23: 1769, Dec. 5, 1925.

Occupational-Disease Reports in Ohio.—This paper is a presentation and discussion of the workings of the Ohio law for the reporting of and compensation for occupational diseases.

During the nineteen months ending November 30, 1914, there were found by the special occupational-disease investigators for the (then) State Board of Health a total of 854 occupational diseases of positive (specific, noncontroversial) character, to which 211 of tentative character, 301 of industrial tuberculosis, and 39 miscellaneous were added, making a total of 1,415 cases. At that time, lead poisoning was by far the chief affliction reported, totaling 544 of the 864 positive cases. Brass chills contributed 117 cases; dermatoses made up only 41 cases; benzine and benzol poisoning, 33 cases. From December 1, 1914, to June 30, 1920, 873 additional cases of positive occupational diseases had been reported, bringing the total to 1,737 bona fide cases of occupational diseases, not including tentative cases and cases of reputed "industrial tuberculosis." The present study adds 3,226 more approved cases, making a total of 4,963 reported between May, 1913, and June 30, 1925—a period of twelve years and two months.

Following the enactment of the compensation law, which schedules 15 definite occupational afflictions for compensation and which became effective August 4, 1921, the reporting of occupational diseases to the State Director of Health took on a very material increase. The section containing this schedule reads as follows: "The following diseases shall be considered occupational diseases and compensable as such, when contracted by an employee in the course of his employment in which such employee was engaged at any time within twelve months previous to the date of his disablement and due to the nature of any process described herein. (1) Anthrax. (2) Glanders. (3) Lead poisoning. (4) Mercury poisoning. (5) Phosphorus poisoning. (6) Arsenic poisoning. (7) Poisoning by benzol or by nitro- and amido-derivatives of benzol (dinitro-benzol, amilin, and others.) (8) Poisoning by gasoline, benzine, naphtha, or other volatile petroleum products. (9) Poisoning by carbon bisulphid. (10) Poisoning by wood alcohol. (11) Infection or inflammation of the skin on contact surfaces due to oils, cutting compounds, or lubricants, dust, liquids, fumes, gases, or vapors. (12) Epithelioma, cancer, or ulceration of the skin or of corneal surface of the eye due to carbon, pitch, tar, or tarry compounds. (13) Compressed-air illness. (14) Carbon-dioxid poisoning. (15) Brass or zinc poisoning."

In fact, this compensation feature, although negotiated entirely through another state department, that of industrial relations, influenced reporting very much more than did the penalty clause (2, Section 1243-5, General Code) which was enacted in 1919, but which proved practically no stimulus. This is shown from the fact that for the period August 4, 1921, to June 30, 1925, four years, lacking thirty-four days, the State Director of Health received 2,689 reports of approved cases as compared to 2,274 reports received prior to that time (or from May, 1913)—a period of eight years, plus about ninety days. Variations in industrial activity could not have accounted for the difference to any perceptible degree. Since the inauguration of the compensation law necessitated double reporting of the fifteen occupational diseases scheduled—i.e., to the

State Director of Health, and to the State Department of Industrial Relations—it was foreseen that many cases would be reported to one agency and not to the other. Roughly, however, over half of the cases reported for compensation have not been reported to the Director of Health, and therefore constitute some 1,400 additional cases of occupational diseases which should be added to the figures presented in this study if the total reported cases is wanted; in other words, 4,963+1,400= 6,363, or the approximate total number of cases of specific occupational diseases reported in Ohio by physicians on official blanks during the approximately twelve-year period ending June 30, 1925. Total compensable: male 2,781; female, 410. Total noncompensable: male, 33; female, 2.

Lead poisoning is further detailed in a separate table with appropriate summary.

Dermatoses among rubber workers, both male and female, are discussed, and a separate table is given for each sex.

Compensation for occupational diseases is a principle generally acknowledged as correct. Such afflictions, however, constitute a very small part of the sickness disability which occurs among workers. Recently Sappington found that sickness causes twenty times as many cases of absenteeism as do accidents, and is responsible for seven times as much loss of time from work. True, the greater portion of sickness disability among workers is extra-industrial in nature, and is equally as prevalent among adults of like ages and sexes in the community, but a large part is measurably influenced by industrial environment and methods of personnel supervision and, as such, is capable of considerable reduction in the matter of days of absence from work.

Dublin gives conclusions based on incidence of illness among policy holders of the Metropolitan Life Insurance Company of New York. The average loss of working time was eight days per annum for gainfully employed men. Inasmuch as a great deal of illness goes unrecorded, the actual loss was probably much heavier. Furthermore, men who are engaged in industry and whose daily wages are vital to their families will often continue to work under conditions of personal health which would very properly impel clerical and professional employees to stop work and seek the advice of a medical man. Among industrial workers the death rate from accidental causes is about two and one-half times that for the nonindustrial group. Tuberculosis is more important than accidents, and is responsible for a loss of between 18 months and two years in the longevity of workers. Industrial employment is probably the most important single factor in the tuberculosis death rate. Pneumonia is twice as high among industrial as among nonindustrial workers, and is therefore considered an added industrial hazard. Further research is necessary, however, to show the relation between the development of pneumonia and industry. In a similar manner other conditions such as cerebral hemorrhage, Bright's disease, and organic heart disease show strikingly the effects of industrial exposure. The death rates are two and three times as high as in the nonindustrial groups during the active working years of life.

Some companies in Ohio, after commensurate organization, have cut from the customary seven or eight days per person per year to two-thirds of that figure and even less, and we note that one company in its annual report for 1924 claims a reduction to as low as 23.5 hours per employee for the year 1924, with a remark that this is an increase of only 0.2 per cent over the year 1923.

As an example in environmental control, the New York State Commission on Ventilation reports that a difference in room-ventilation methods effecting a change of only 2° F. in temperature, was found to make a difference of 18 per cent in absence due to respiratory diseases in school children, and a difference of 70 per cent in total illness from respiratory diseases. Truly, we are in an era when the fundamental importance of certain apparently trifling things is being recognized in many vicissitudes of life and business.—E. R. Hayhurst and D. J. Kindel, *Jour. Indus. Hyg.*, VIII, 4, 143.

Industrial Accidents to Young Workers.—Youth is a special hazard in industrial employment, and as such is entitled to special protection by the law. This principle, already expressed in legislation in a number of states forbidding the employment of children under 16 (and to some extent under 18) in the operation of certain dangerous machinery, must be further extended if grave economic, social, and individual waste is to be avoided.

In these two paragraphs the main conclusions of an exhaustive analysis of industrial accidents to minors in three states, made by the Children's Bureau of the U. S. Department of Labor, are summarized. The Children's Bureau study has been recently published as *Bureau Publication No. 152.* The report presents the results of a study of industrial injuries to employed minors in Wisconsin, Massachusetts, and New Jersey, with especial reference to the causes of such injuries and to their economic and social effects.

Analysis of the injuries sustained by cause showed that machinery—the most frequent cause of injury—was responsible for 36.2 per cent of the injuries. Handling objects was the second most frequent cause of injury in all three of the states covered by the study. The most serious results of handling heavy objects are strains, the number of which could be reduced by prohibiting young workers from doing work which involves heavy lifting. This is especially necessary in view of the large number of cases of hernia (122) resulting from strains. The percentage of hernia cases among all the injuries to minors was 1.5 in Wisconsin, 2.3 in Massachusetts, 0.7 in New Jersey. Another class of objects handled—namely, sharp or rough objects—was the cause of many injuries. Probably many of these injuries were slight in themselves, but infection developed in a large proportion of them. In New Jersey, for example, infection developed in half of the compensable injuries caused by handling rough or sharp objects. Falls of persons ranked third in the number of injuries caused. Seven deaths were due to falls, but the percentage of permanent partial disability from this cause was comparatively low. Most of the injured fell on level surfaces because of slipping and stumbling over objects. The falls from elevations were mostly from stairs.

Although some had been able to follow the same occupation or a more promising one, in the three to six years that have elapsed, others had been forced by their injuries out of chosen occupations into work with smaller industrial opportunities, and some had been unable to find any kind of employment. Many of these young people, now in their early twenties, are sensitive over their deformities, discouraged by their prolonged economic dependence upon their families, and hopeless over the future, the bureau found.

THE MEDICAL SOCIETY

OF THE STATE OF PENNSYLVANIA

OFFICERS' DEPARTMENT

WALTER F. DONALDSON, M.D.
Secretary
8062 Jenkins Arcade Bldg.,
Pittsburgh, Pa.

PAYMENT OF PER-CAPITA ASSESSMENT

The following payment of per-capita assessment has been received since October 2. Figures in the first column indicate county society numbers; second column, State Society numbers:

Oct. 2	Philadelphia	2063-2075	7493-7505	$65.00
2	Erie	130-132	7506-7508	15.00
2	Fayette	128-129	7509-7510	10.00

CHANGES IN MEMBERSHIP OF COUNTY SOCIETIES

The following changes have been reported to September 17:

ALLEGHENY: *Removal*—Charles C. Dickey from Russellton to 134 No. Mill St., New Castle (Lawrence Co.); Auleen M. Jamison from Aspinwall to New Concord, Ohio; J. W. Funk from East Pittsburgh to 634 Lenox Ave., Wilkinsburg.

BUCKS: *Death*—Clayton D. Fretz, Sellersville (Univ. of Penna. '68), Aug. 17, aged 82.

CAMBRIA: *Death*—George Martin, Conemaugh (Jeff. Med. Coll. '85), recently, aged 68.

CHESTER: *Removal*—John H. Davis from Coatesville to Wayne (Del. Co.).

DELAWARE: *Removal*—James W. Brice from Chester to Robert Packer Hospital, Sayre (Bradford Co.).

ERIE: *Reinstated Members*—Alex. C. Cameron, 11 W. 8th St., Adelbert B. Miller, 159 W. 8th St., Erie; Jesse C. Stilley, Ludlow (McKean Co.).

FAYETTE: *New Members*—Francis J. King, Connellsville; Domenico Rosati, Uniontown. *Death*—Albion J. Marsten, Belle Vernon (Univ. of Pgh. '05), June 21, aged 47.

LAWRENCE: *Resignation*—Wayne S. Ramsey, Ann Arbor, Mich.

LUZERNE: *Removal*—Henry W. Banks from Kingston to 509 Harrison Ave., Norwood (Del. Co.). *Death*—Edward J. Flanagan, Wilkes-Barre (Jeff. Med. Coll. '11), July 29, aged 45.

MONTGOMERY: *Death*—George F. Hartman, Norristown (Jeff. Med. Coll. '85), Aug. 27, aged 63.

PHILADELPHIA: *New Members*—Robert A. Kimbrough, 2017 Walnut St., Howard W. Schaffer, 4519 Sansom St. *Reinstated Members*—Bowman C. Crowell, 40 E. Erie St., Chicago, Ill.; W. A. N. Dorland, 25 E. Washington St., Chicago, Ill.; Louis Seligman, 1529 Spruce St., J. Howard Smith, 5841 Florence Ave., Joseph M. Spellissy, 317 S. 15th St., John M. Weber, 2531 Columbia Ave., William C. Wood, 2007 Chestnut St., Philadelphia. *Deaths*—Charles J. Schneider (Jeff. Med. Coll. '96), Aug. 18, aged 56; Herman H. Birney (Univ. of Penna. '89), Aug. 25, aged 60.

WASHINGTON: *Removal*—Charles J. D. McVeigh from Carmichaels to Yukon, Westmoreland Co.

COMMISSION ON COMPENSATION LAWS

LEVER F. STEWART, *Chairman*
Clearfield, Pa.

THE DEFINITION OF MEDICO-INDUSTRIAL PROBLEMS

Since the Compensation Law went into effect it has been a thorn in the side of physicians of Pennsylvania. Many injustices have been done to both injured men and physicians. Some of the mistakes made must have been the result of ignorance. Frequently it is very difficult for referee or board to distinguish the merits of two perfectly well-presented but conflicting medical opinions.

Would the injured man as well as the medical profession of the state be better served if representatives of the State Society undertook the defining of certain medical problems constantly under dispute? For instance, a proper definition of the relation of injury to hernia, apoplexy, cardiac disease, sarcoma, etc., would be genuinely helpful to those responsible for the administration of the Compensation Law, and in addition to giving evidence of genuine interest in the impersonal operation of the law, would remove certain conflict of medical authority coming before its administrators.

Could the State Society properly charge its Compensation Commission with such a task? Should such a commission be composed of five men? Should these physicians be drawn from the ranks of the industrial regions, or should they be drawn from our teaching institutions, or should the personnel of such a commission be drawn from both? The thought has many possibilities. It could lead to the closest coöperation between the physicians of the State and the administrators of the law.

County Society Reports

BERKS—JULY-SEPTEMBER

The July meeting was held at the Reading Country Club, where golf and cards were enjoyed. There was no meeting in August.

At the meeting of September 14th, Dr. M. A. Burns, of Philadelphia, read an interesting paper on "The Mental-Hygiene Movement in Pennsylvania." Dr. Burns touched on the history of the National Committee for Mental Hygiene which was founded in New York City in 1909, and the subsequent division organized in Pennsylvania.

He discussed in detail what was meant by the mental-hygiene movement, taking up the problem from the standpoint of habit training in childhood and the important rôle of parents and teachers in mapping out the habits of children of preschool and school age. He discussed the child-guidance clinic. He went into detail concerning the psychology of the public in its attitude toward mental affections and their consequences, and also individual psychology.

Dr. Burns pointed out that the mental patient of today is treated from the medical standpoint, just as if he were not regarded as a mental problem. He is given as careful study as methods of modern general medicine permit, so that the patient—if not in a stage of delirium or stupor—soon receives the impression that he is not considered as one who is commonly called "out of his mind" but as one who is ill.

Dr. Burns also indicated that the greatest good can be accomplished when the community at large will look upon a mentally diseased person as ill and not criminal. He also deplored the inadequacy of our public institutions for caring for acute psychopathic cases and the crying need today for such institutions, in order that we may take care of our nervous and mental patients in the beginning of their illness and in this way prevent the development of many mental cases.

It was stated that two-thirds of the mental patients today can not only be cured, but that their condition can and will be prevented when our physicians and public are properly trained to take care of the acute psychopathic cases.

Clara Shetter-Keiser, M.D., Reporter.

CAMBRIA—AUGUST

The annual meeting at the north of the county was held at Spangler, August 12, 1926. Dinner was served at the Hotel Brandon. The Ladies' Auxiliary met in the afternoon, and elected the following officers: Mrs. Joseph J. Meyer, president; Mrs. J. W. Barr, first vice-president; Mrs. W. S. Daugherty, second vice-president; Mrs. Charles Shultz, secretary, reëlected; and Mrs. W. E. Grove, treasurer. Mrs. Meyer and Mrs. Dunnick were selected as delegates to the State Auxiliary meeting to be held in Philadelphia October 11 to 14, 1926. Plans were made for the auxiliary to meet the second Thursday of each month. Following this meeting the ladies played bridge.

The scientific program was in charge of Dr. H. M. Stewart, of Johnstown, who read a paper on the diagnosis of gall-bladder disease. He said, in part:

The diagnosis of gall-bladder disease has been one of the difficult fields of internal medicine. During the past twenty-five years, there has been very little change in the aids in making a differential diagnosis. Definite gall-bladder pathology develops slowly, and the previous history will show a long prodromal period. Gall-tract infection should not be visualized in terms of gall stones and advanced pathologic conditions.

The typical picture of gall-stone colic may be quite unassociated with a materially altered gall-bladder structure, except during an attack itself. Cholecystography after the acute symptoms subside shows a normal gall bladder. Likewise, the surgeon diagnoses a normal gall bladder on the operating table.

During the terminal stage of the evolution of gall stones, the new roentgenologic evidence is of great interest, undoubtedly accurate when positive, and often of great value. But with the Graham method only a little more than two years in use, the roentgenologist should not be held accountable for 100-per-cent opinions on gall-bladder pathology.

In 1909 Abel Rowntree discovered that the liver secretes the halogen compounds of phenolphthalein. Graham and his associates found that calcium and sodium salts of tetrabromphenolphthalein given intravenously would deposit enough of the dye in the normal gall bladder to give an opacity to the ray. Whitaker and Milliken have shown that the iodin salt can be given in smaller doses and is less toxic. At present, little discomfort is experienced by the intravenous method. At the sixth hour, the gall bladder, if normal, gives the densest shadow. After this examination a meal rich in fat is given, and an examination made an hour later. At this time the normal gall-bladder shadow has diminished very markedly and is also more dense, due to the concentration of bile. Recently the oral method has become very popular. Today most of the large clinics are using this method. They reserve the intravenous method for selected cases which cannot retain the capsules, or, if in doubt, as a check to the oral method.

The variations in the position of the gall bladder are of importance chiefly to the clinician. Morris's anatomy gives the region of the gall bladder in the right hypochondrium and epigastrium. Roentgenology has proved this wrong, and that palpating high under the ribs often misses the gall bladder. Furthermore, low gall bladders may be mistaken for floating kidneys, and cause pain in the area of McBurney's point or even in the right ovarian region. Therefore, the tetraiodophenolphthalein method has served an important purpose in gall-bladder diagnosis, in giving the size, shape, and position of the gall bladder.

If the gall bladder shows only faintly or fails to show at all, our suspicion is directed to it. But we cannot immediately make a diagnosis of gall-bladder lesion without further study. Advanced diseases of the liver, such as cirrhosis, must be excluded. Then failure of the gall bladder to fill with the dye may be due to obstruction of the bile passages by a stone, by thickened mucus, or by swollen edematous walls. Likewise, small adhesions will often cause constriction of the bile ducts.

When gall stones block the cystic duct, the failure of the gall bladder to fill may be purely mechanical, but in many cases in which the ducts are not blocked, the gall bladder fails to show in the usual way. This must be attributed to associated diseases of the gall bladder or bile passages. The gall bladder will fail to visualize in the presence of jaundice, irrespective of whether the jaundice is infectious or obstructive. However, no untoward effects have been observed following the giving of the dye to jaundice patients.

We feel the Graham test in the diagnosis of gall-bladder pathology has been the most progressive step in abdominal diagnosis since the introduction of the opaque meal. We need constructive criticism. We all know that when the abdomen is opened and the surgeon makes

a thorough visual and palpable examination his opinion of the case is not always final. We have all seen some cases where a negative opinion of gall stones was reported, and later gall stones have passed through the incision or drainage tube. Should we, as medical men, criticise the surgeon? No physician who has made a careful study of the liver and bile passages would do so. The Graham test has been in use for only a little more than two years. The roentgenologist needs all help possible, and should study and follow his cases to the operating room. A close coöperation of the roentgenologist with the clinician and surgeon is essential for a correct diagnosis.

W. B. Templin, M.D., Reporter.

LUZERNE—SEPTEMBER

The meeting of September 1st opened the fall term of the Luzerne County Medical Society, with President P. P. Mayock in the chair. Dr. S. H. Rynkiewicz of Kingston read a paper on "Osteomyelitis," illustrated by lantern slides of roentgen-ray studies from his own practice and having special reference to osteomyelitis of the distal phalanges.

Dr. Shafer: One thing that occurred to me is whether the men have had much experience with the quartz light, and whether or not the x-ray is superior to the quartz light.

Dr. O'Donnell: There is an interesting case before the referee at the present time. A young man developed osteomyelitis of the left humerus after a slight injury while "fooling" at work. A week prior he had had a crop of boils. The question to decide is whether the inflammation is due to the injury or the boils.

Dr. Mayock: The diagnosis is usually missed. The general practitioner who is called first should be able to make the diagnosis. Pain and swelling are the two most outstanding symptoms. The infection, being close to the joint, is usually mistaken for rheumatism. The age of the patient and the history are important.

Dr. Rynkiewicz: The very common cause is exposure to cold, or following an attack of acute follicular tonsillitis or otitis media. Furunculosis or infected abrasions may cause it by spreading by continuity. The lowered resistance of the patient plays an important part. I suggest looking for a focus of infection in the case referred to in the discussion. In hypertrophic arthritis the quartz lamp is very beneficial. Where deeper effect is to be secured, diathermy or x-ray should be used.

Lewis T. Buckman, M.D., Reporter.

FOURTH COUNCILOR DISTRICT

The biennial meeting of the Fourth Councilor District was held at Harrisburg on September 18th. Following a buffet luncheon at the Harrisburg Country Club, the afternoon was spent in sports and social intercourse. The business meeting was called to order at five o'clock, and was devoted largely to a discussion of the proposed legislative program under the leadership of Dr. J. Norman Henry, of Philadelphia, chairman of a special committee to draw up a legislative act, President-Elect Harry W. Albertson, of Scranton, and Dr. A. C. Morgan, of Philadelphia, chairman of the Committee on Public Health Legislation. President Ira G. Shoemaker, of Reading, discussed current events, and Dr. T. B. Appel, of Lancaster, councilor of the District, explained the proposed changes in the Constitution and By-Laws of the State Society. This meeting was followed by dinner at the club.

At 8:30 a meeting was held at the Penn-Harris Hotel in conjunction with the Harrisburg Academy of Medicine, at which Dr. Charles H. Mayo made the address. His paper dealt with atomic structure, comparing this with the solar system; with the electromagnetic spectrum, showing the relation of the various wave lengths to the ultraviolet rays; and with the therapeutic value of the latter rays. This paper was preceded by an informal talk on infection, sugar, teeth, calcium metabolism and parathyroid, the increasing length of human life, and other interesting subjects. This meeting was followed by a reception and buffet supper.

SIXTH CENSORIAL DISTRICT

The twentieth annual meeting of the District was held at Graeffenburg Inn, Franklin County, August 26, at 11:30 a. m. In the absence of the president, Dr. J. McCrea Dickson, Dr. George E. Holtzapple, of York, presided. There were 85 doctors and their families present, including the following guests: Drs. S. G. Pontius, T. G. Shookers, and Theodore B. Appel, of Lancaster, and their families.

Dr. John B. Carnett, of Philadelphia, delivered an address on "Intercostal Neuralgia as a Cause of Abdominal Pain and Tenderness." He told how this condition often is mistaken for acute abdominal disease, and as a result, the patient unnecessarily operated upon without relief, and described its differential diagnosis. Two of our doctors who had suffered from this affection were demonstrated upon as patients.

The organization acted unfavorably on the admission of Perry County to the district, on account of its distance.

Dr. Theodore B. Appel, of Lancaster, gave a brief talk on recent legislative developments of interest to the medical profession throughout the State.

Dr. R. H. McCutcheon, of the State Tuberculosis Sanatorium at Mt. Alto, talked on the desire of the State Department of Health to coöperate with the doctors throughout the district by sending into the various counties consultants and portable laboratories to aid in the diagnosis and treatment of tuberculous patients and assist in the State child-welfare work. The district acted favorably in this matter.

Dinner was served following the scientific papers.

W. Newton Long, M.D., Secretary.

The Woman's Auxiliary of the Medical Society of the State of Pennsylvania

Mrs. W. Wayne Babcock, *Editor*
Rydal, Pa.

ANNUAL REPORT OF THE WOMAN'S AUXILIARY OF THE FAYETTE COUNTY MEDICAL SOCIETY

The initial meeting of the Woman's Auxiliary of the Fayette County Medical Society was held in the Laurel Club Rooms September 10, 1925, with an encouraging number present. Mrs. J. I. Johnston, president of the Allegheny County Auxiliary, was the speaker of the afternoon, and brought to us a most stirring message.

Dr. Mayer, president of the Allegheny County

Medical Society, made an address at the October meeting, on our duties and responsibilities. Dr. Mayer is most versatile, and his talk was of the heart-to-heart kind.

The December meeting was very interesting, as reports from the State meeting, held at Harrisburg, were made by our president, also by our delegate, Mrs. H. A. Heise. The members of the Society felt very highly honored in having our president, Mrs. C. H. Smith, elected to the office of second vice-president of the State organization. Mrs. H. E. Hall gave a very interesting account of the social doings, which were quite elaborate and most enjoyable. Miss Margaret Wilhour, educational secretary of the Fayette County Tuberculosis Society, gave an instructive talk on tuberculosis. Miss Lucy Fogg, school nurse of the Uniontown public schools, described her activities in the schools of our city. Mrs. J. F. Kerr, of Connellsville, discussed public-welfare work.

The January meeting proved to be most enjoyable, as Dr. H. J. Bell made a very fine address on "The Eternal Feminine." It was decided at this meeting to endeavor to increase the influence of the magazine *Hygeia* by interesting the different clubs and schools.

At the February meeting a representative of the State Welfare Department, Mr. Ernest Cole, gave a talk on mental health.

At the March meeting, the treasurer was authorized to send $25 to the Brownsville and Connellsville hospitals, and $25 to the Uniontown Hospital ambulance fund.

Our annual business meeting was held in May at the White Swan Hotel. Preceding the meeting, a delicious dinner was served in the ballroom, at which our husbands were guests. As the only social event of our first year, this was voted quite a success. At this meeting the old officers were reëlected. It was also decided that the Society should have a summer-outing committee, appointed by the president, for the purpose of giving a day's outing to the poor children of our county. The address of the evening was given by Mrs. W. Wayne Babcock, of Philadelphia. Her talk was filled with helpful suggestions, and inspired us to more real service to the medical society of which we are a part.

During the early part of August, under the leadership of the summer-outing committee, with the help of many of the members, about one hundred children were made very happy at an afternoon party held at the Country Club. They were entertained with a Punch and Judy show given by a professional performer, and had a wonderful time on the lawn, after which they were served ice cream, cookies and candy, lolly pops, whistles, balloons, and paper hats, altogether making the afternon one long to be remembered.

This outing brought to a close the activities of our first year as an organization.

Mrs. C. H. LaClair, Reporter.

WESTMORELAND COUNTY AUXILIARY MEETING

The Woman's Auxiliary of the Westmoreland County Medical Society did not convene during the months of June, July, and August. In the hope of stimulating immediate interest in club activities, the first meeting, held September 7th at the American Legion home in Greensburg, took the form of a very attractive luncheon.

This was followed by a business meeting, when plans for the fall and winter were briefly discussed. The president urged all present to foster interest in subscriptions to *Hygeia*. The following members were appointed to represent the club at the State convention: Mrs. W. J. Walker, Mrs. H. H. Hamman, Mrs. C. E. Snyder, and Mrs. C. D. Ambrose.

Upon the suggestion of Mrs. Thomas St. Clair, of Latrobe, arrangements were made to hold the next meeting at the Latrobe Country Club. Standing committees were authorized to make preliminary plans for a benefit card party to be held the latter part of October.

MEETING OF THE STATE BOARD OF MEDICAL EDUCATION AND LICENSURE

A summarized report is presented herewith of the proceedings of a meeting of the Board held August 29, 1926, in the library of the Pennsylvania Hospital, Philadelphia, Pa., with officers of the three State medical societies, to discuss matters of law enforcement in relation to the practice of medicine in Pennsylvania.

The meeting was opened by the president of the Board, Dr. I. D. Metzger, who stated that last May a joint meeting had been held with representatives of the three State medical societies, and at that time the matter of dealing with drugless therapists in relation to the Medical Practice Act was taken up, and the opinion was unanimous that the Act should be enforced. It was a question at that time whether the drugless therapists might be given an easier form of examination, but the Board did not see its way clear to do so.

The purpose of this meeting was to explain what the Board had been able to do, and the difficulties it has met; also to give information which may be carried back to the respective medical societies.

Statement of the Chairman, Dr. I. D. Metzger: The Board first of all has attempted to find out the situation relative to irregular practitioners in the State (practitioners of the healing art in any form). It found a number of physicians practicing who were not licensed, most of whom had taken the State Board examination and failed once or twice, but continued to practice. These were caught up by the Registration Act, and were given another chance to qualify.

A large number of drugless therapists are not licensed, about 400 have been licensed, and 500 to 800 are practicing illegally. We have attempted to obtain a list of certain outstanding violators of the law, but encountered great difficulty in bringing them to justice. Furthermore, we need legal aid in our efforts to prosecute further.

In 1913 the present medical act was passed. All branches of medicine except osteopathy and optometry were made subject to the jurisdiction of the Board. Drugless practitioners were classified in three groups: chiropodists, physiotherapists, and drugless therapists. There is a large variety of the latter—chiropractors, neuropaths, electropaths, etc.

The requirements for drugless therapists are as follows: A high-school education, followed by one year of college science, two years of medical science, and a year devoted to diagnosis and particularly to the practice which they intend to follow.

The Board Upheld: A higher decision was obtained in two cases. The first was that of R. L. Byrd, chiropractor, found guilty of practicing without a license. He contended that his practice was not practice of medicine, but the decision rendered by Judge Orlady of the Superior Court was that it was plainly and definitely included in the practice of medicine—that this covered any form of practice of the healing art. Byrd lost his case.

The other appeal was that of a neuropath named Seibert. This case was taken to the Supreme Court. Judge Stewart, quoting Judge Orlady, maintained that the Board had jurisdiction under the law.

A case from Ohio was at one time appealed to the Supreme Court of the United States, and the recollection of your chairman is that it was turned back to the State as without the jurisdiction of that Court.

There has been little difficulty in apprehending those whom we want to prosecute. These drugless therapists have been practicing medicine without a license. Our difficulty has been to get the magistrate to hold the cases over for court. The chief efforts of the drugless therapists have been directed toward preventing the cases from going to court.

Appeal to the Governor: A letter written to Governor Pinchot by Blanche R. Young, chairman of the State Chiropractors Association, complained of the Board prosecuting or "persecuting" chiropractors, and asked that a restraining hand be placed upon the prosecutors. Governor Pinchot referred the letter to the secretary of the Board, whereupon the president replied to the Governor, and received a commendatory response from him.

Efforts at Prosecution

Mr. W. J. Hawes, investigator for the Board in western Pennsylvania stated: Our first prosecution was made in New Kensington. At the time the investigation was made, the squire seemed to be very favorable. The hearing took place about one week later, and the squire then seemed to have changed very much. Two of the cases were heard and dismissed. Probably 800 people filled the office and sidewalks outside. After the two cases were dismissed, we asked the squire to dismiss the third case. The evidence presented was complete and guilt was acknowledged, but the cases were arbitrarily dismissed.

We have had two persons arrested in Kittanning—one from Ford City and the other from Kittanning. At the hearing they were held for court under bond. Last week the squire decided to give them a rehearing, saying he wanted to reconsider the matter. Upon protest over the telephone, the squire became very abrupt, and said we should have to see the district attorney. At the second hearing the two chiropractors were present, and there were five witnesses against them—people they had treated. The chiropractors made no defense and introduced no witnesses, and their attorney made no argument. In my opinion the thing was all prearranged. Two days later the squire had not rendered a decision. (These cases were later held for the Grand Jury.)

Two chiropractors were arrested in Butler, and practically the same thing occurred. A little larger crowd was present. In these cases the chiropractors introduced witnesses. One put on four or five. These chiropractors were treating hay fever, rheumatism, and insanity. One treated a man who had been referred to the State sanatorium at Warren by a physician. The wife had secured the services of the chiropractor, but finally had to send her husband away. We could not get the wife for a witness.

A letter received from the District Attorney of Butler County, explaining the unfairness of the hearing, was read. President Metzger stated that the Board had asked the State police to come to the hearing in Kittanning, and everything was orderly. He explained that he had taken up the matter with the Attorney General's office in Harrisburg, and he hoped that legal aid might be forthcoming in future efforts.

Mr. Charles Fry, investigator for the Board, reported two cases in Bucks County held for the Grand Jury, and nine cases in Lancaster, and stated: We lost seven cases in Lycoming County last week. The district attorney double-crossed us. The alderman and council for the chiropractors were in the other room conferring before the hearing. I took a man formerly in the Attorney General's office, but was told by the district attorney that he did not want to see him. The hearing was held in the town hall, and there were 600 to 700 people present. The alderman prolonged the hearing, and granted ten days to give a decision. When we left Williamsport, all the chiropractors were at the alderman's office.

In Lycoming County Mr. Fry copied names of patients of chiropractors, which they gave willingly, thinking they were helping the chiropractor, to use against them in the future. The chiropractors hope to keep their cases out of court.

Mr. Fry: There are a good many chiropractors coming in from other states. There are four more chiropractors in Williamsport now than a month ago.

Dr. E. F. Shaulis, president of the Eclectic Medical Society, said there are more chiropractors in Indiana County. One came to him and said he was packing up and leaving the county, so it seems that some of them are beginning to be afraid of the outcome if they continue to practice.

Dr. A. C. Morgan, chairman of the Legislative Committee of the State Society, asked if the chiropractors are coming in from New York State.

Dr. Metzger: It is quite evident that we need legal direction. This means more money. A statement given me from Harrisburg shows that we were allotted $62,250 for the biennium. The Board used $28,000 in the first year. We shall require much more in this current year. There will be only a small amount available for prosecutions, yet we must not stop with this effort, but work carefully and energetically. We must see that these cases get into court, and we should be directed by an attorney who knows medical law and who can support the magistrate as well as the district attorney.

Deputy Attorney General Snader: I have no authority to speak for the Attorney General, because I

did not lay the matter before him before leaving. My recommendation will be that it is highly desirable that some deputy be assigned to this work to steer the cases through the lower courts. That is the best way to get results. Any attempt to employ attorneys throughout the State will give only indifferent results. They will not know what is done in other counties.

In regard to the financial situation, this was not contemplated in 1925. The Attorney General does not have any extra money for this work. Perhaps the shortage in the appropriation could be borne partly by the medical societies. A few thousand dollars would take care of this. The story should be told so that the public would know this is not personal prosecution. The law was passed in 1913, and these people must know they are violating it. If you think some one should be assigned to this work, I will take it up with the Attorney General.

Dr. Metzger: The oncoming state medical meetings make this conference especially apropos. It will make possible a report to physicians who are wondering what is being done with their dollars. The registration fee should be more than a dollar to meet the needs.

Dr. Adolph Koenig, member of the Board: The medical profession is the only profession which pays to have laws enforced. The State receives money from candidates.

Mr. Snader: This is not peculiar to the medical profession. The same situation is present with pharmacists, optometrists, undertakers, etc. These professions collect funds to push their laws. There is considerable difficulty in getting lump sums for enforcement.

Dr. Morgan: We have $700. No special effort has been made to solicit contributions this year because it is an off year and because the doctors had paid for the first year.

Dr. Morgan felt that the most he could do was to tell the medical profession that their money had been used to good advantage, and offered the following resolution:

"It is the sense of this conference that the Attorney General of Pennsylvania be requested to assign a special deputy attorney general in charge of carrying out the provisions of the Medical Practice Act."

This resolution was seconded by Dr. Shoemaker and passed. Mr. Snader was asked to present this request to the Attorney General.

Dr. Vaccaro, of Philadelphia, reported the case of A. J. Newman, a chiropractor of South Broad Street, Philadelphia. He is a fugitive, sued for alienation of affection, etc. He has been practicing drugless therapy for some time. He tried to treat a patient with tabes dorsalis, and after collecting several hundred dollars, he told the patient to walk without his crutches. The patient fell when leaving the office. The chiropractor was arrested, but discharged by the magistrate under the charge of stealing a pair of crutches.

A second patient he treated was that of a woman who was passing through the menopause. He had this woman, nude, tied to a dirty cot in the basement of his establishment, demonstrating her as a model. The patient was finally taken to the Philadelphia General Hospital, and the chiropractor arrested, charged with illegal practice, cruelty to his patient, and obtaining money under false pretenses. He engaged as his attorney the nephew of the magistrate who heard the case. The hearing was twice postponed, and when we arrived on the second date set, we found it had been held the preceding day.

Mr. Fry believes that the chiropractors themselves will not stand back of this man Newman. He appears to be mentally unbalanced. He stated that the chiropractors pay $60 a year to the U. C. A., and have $260,000 in their treasury, and it seems as though we ought to be able to collect more money to help fight them.

Dr. John G. Wurtz, vice-president of the Homeopathic Society, talked of malpractice insurance. It was not thought that the insurance companies would insure chiropractors, but it is reported that Lloyd's in London have blanket insurance to pay all claims against chiropractors.

Dr. E. F. Shaulis, president of the Eclectic Society, said that the annual meeting of his society is past, but the society will stand back of the State. He said he would gladly pay a five-dollar registration fee to keep the chiropractors out of his town. New York State has $45,000 to $50,000 for prosecutions; therefore, they have something to work with. Their registration bill carries a two-dollar license fee.

Dr. W. M. Hillegas, secretary of the Board, stated that he is sorry the two-dollar fee which he had originally written into the Pennsylvania registration bill did not pass the Legislature. He feels that we must fight against a separate chiropractic board, but that it will be a big fight.

Dr. Morgan stated that just before the primary elections he wrote a letter, 7,600 copies of which had been sent out to the members of the State Medical Society. He believes this letter defeated Mr. Beidleman, and that it transferred from 15,000 to 20,000 votes to Mr. Fisher for Governor.

Dr. Ira G. Shoemaker, president of the State Medical Society, stated that Mr. Fisher had recently expressed his appreciation of the work that has been done by the Society.

CORRESPONDENCE

Philadelphia, Pa., September 17, 1926.

Editor of the
Atlantic Medical Journal.

Sir:

In one of the excellent papers published in your September issue in the Symposium on Fractures, Dr. W. L. Estes, Jr., refers to the observation of Tisdall and Harris (*J. A. M. A.*, 1922: 884) that following major fractures in adults there is a rise in the inorganic phosphorus content of the blood and a parallel change in the calcium content; that after union the phosphorus gradually falls; and that, as a rule, cases with nonunion do not show this rise.

It seems to the writer that, excepting in those fractures where there has been devitalization of tissue, frequent intramuscular injection of blood taken from a growing child, with its high content of calcium and phosphorus, might be efficacious, especially in view of Shipley's experiments reported in the *Bulletin of the Johns Hopkins Hospital* for September, 1924. He found that in isolated pieces of bones of a rachitic rat, when placed in serum taken from normal rats, the normal process of calcification began in forty-eight hours, as a result of contact with the normal serum containing a greater amount of calcium and phosphorus.

Respectfully submitted,

Max Trumper, Physiologic Chemist.

Leffmann-Trumper Clinical Laboratory,
920-21 Medical Arts Building.

THE MEDICAL SOCIETY OF DELAWARE

PROGRAM

ONE HUNDRED AND THIRTY-SEVENTH ANNUAL SESSION

1789-1926

October 12 and 13, 1926, Dover, Delaware

OFFICERS

President, J. B. Derrickson.
First Vice-President, Olin S. Allen.
Second Vice-President, Richard Beebe.
Secretary, W. O. LaMotte, Industrial Trust Bldg., Wilmington, Del.
Treasurer, S. C. Rumford, 1403 Market Street, Wilmington, Del.
Councilors, W. T. Jones, Henry W. Briggs, I. J MacCollum.

DELEGATES

Kent County: Joseph Bringhurst, J. S. McDaniel; *Alternate,* L. D. Phillips.
New Castle County: W. V. Marshall, A. J. Gross, O. S. Allen, J. Palmer, W. E. Bird, J. H. Niles, L. Booker, O. W. Show, H. L. Springer, J. Adair; *Alternates,* N. W. Voss, B. S. Vallett, Paul Smith, T. H. Davies, Albert Robin, Eli Nichols.
Sussex County: G. E. James, J. R. Elliott, G. F. Jones; *Alternates,* R. B. Hopkins, K. J. Hocker.

COUNTY SOCIETY OFFICERS FOR 1926

New Castle: *President,* W. H. Speer; *Vice-President,* E. R. Mayerberg; *Secretary and Treasurer,* B. S. Vallett.
Kent: *President,* O. V. James; *Vice-President,* J. S. McDaniel; *Secretary and Treasurer,* A. T. Davis.
Sussex: *President,* R. C. Beebe; *Vice-President,* G. F. Jones; *Secretary and Treasurer,* J. B. Waples.

DELEGATES TO OTHER SOCIETIES

American Medical Association: W. O. LaMotte, Wilmington; *Alternate,* W. E. Bird, Wilmington.
Maryland Society: Jos. B. Waples.
Pennsylvania Society: Julian Adair.
New Jersey Society: B. S. Vallett.
New York Society: D. T. Davidson.
State Pharmaceutical Society: C. J. Prickett, J. H. Hammond, J. W. Butler.

COMMITTEES

Scientific: Samuel M. Marshall, H. M. Manning, L. Heisler Ball.
Public Policy and Legislation: I. J. MacCollum, V. D. Washburn, J. R. Elliott.
Medical Education: H. W. Briggs, I. L. Chipman, James Beebe.
Necrology: P. W. Tomlinson, K. J. Hocker, L. A. H. Bishop.
Publication: W. E. Bird, Albert Robin, W. O. LaMotte.
Health Problems in Education: H. W. Briggs, A. T. Davis, J. Roscoe Elliott, J. A. Ellegood, Fred. F. Armstrong.
Hospital: John W. James, Wm. Marshall, Victor D. Washburn.
Arrangements: Jos. Bringhurst, James Martin, A. T. Davis.

MEETINGS

Tuesday, October 12, 1926
2 P. M.

MEETING OF THE HOUSE OF DELEGATES

New Century Club

Order of Business

1. Call to Order.
2. Roll Call.
3. Reading of Minutes of Last Session.
4. Appointment of Committee on Nominations.
5. Reports of Officers:
   a. President,
   b. Secretary,
   c. Treasurer,
   d. Councilors,
   e. Editor.
6. Reports of Committees:
   a. Scientific Work,
   b. Public Policy and Legislation,
   c. Medical Education,
   d. Necrology,
   e. Publication,
   f. Hospitals,
   g. Health Problems in Education,
   h. Auditing,
   i. Nominations.
7. Reports of Delegates:
   a. American Medical Association,
   b. Federation of State Medical Boards,
   c. Other State Societies.
8. Unfinished Business.
9. New Business:
   a. Resolutions,
   b. Communications,
   c. Appropriations,
   d. Approval of Scientific Program,
   e. Selection of Meeting Place,
   f. Miscellaneous.
10. Adjournment.

Tuesday, October 12, 1926
6 P. M.

DINNER TO MEMBERS AND GUESTS

By the Kent County Medical Society

8 P. M.

SCIENTIFIC SESSION

New Century Club

Scientific Papers

1. Case Report—Pylorospasm.
   Dr. Joseph Bringhurst, *Wilmington.*
   Discussion opened by Dr. Oliver V. James, Milford.
2. Ocular Fields in Syphilis (Lantern Slides).
   Dr. William F. Bonner, *Wilmington.*
   Discussion opened by Dr. E. R. Mayerburg, Wilmington.

3. Diphtheria Prevention.
   Dr. C. A. Sargent, Dover.
   Discussion opened by Dr. A. T. Davis, Dover.
4. Sanatorium Treatment for Pulmonary Tuberculosis.
   Dr. S. H. Hurdle, Brandywine Sanatorium
   Discussion opened by Dr. M. I. Samuel, Wilmington.
5. Some Points to Be Remembered in the Diagnosis of Tuberculosis.
   Dr. L. D. Phillips, Dover
   Discussion opened by Dr. Albert Robin, Wilmington.

Wednesday, October 13, 1926

New Century Club

9:30 A. M.

Invocation.
Rev. Charles A. Walker, D. D.
Address of Welcome.
Hon. Wallace Woodford, Mayor of Dover.
President's Address.
Dr. J. B. Derrickson.
Report of House of Delegates.

Scientific Papers

6. Address.
   Dr. Wendell C. Phillips, President of the American Medical Association.
7. Recreation for a Restless Age.
   Eugene T. Lies, Chicago.
8. Contraceptive Methods of Choice.
   Dr. Hannah M. Stone, New York.
9. Fallacies of Birth Control.
   F. L. Hoffman, Ph.D., Consulting Statistician, Prudential Life Insurance Company, Newark, N. J.

1 P. M.

LUNCHEON

Medical News

Deaths

Mrs. James Jeffrey, mother of Dr. R. H. Jeffrey, of Uniontown; August 23.

G. Emanuel Spotz, M.D., of York; Jefferson Medical College, 1897; aged 50; September 21.

Jacob P. Strieby, M.D., of Swarthmore; Jefferson Medical College, 1891; aged 78; September 15.

Isaac Stearn, M.D., of Philadelphia; Baltimore University School of Medicine, 1893; aged 82; September 11.

H. H. Sanderson, M.D., of Johnstown; Hahnemann Medical College and Hospital of Philadelphia, 1900; aged 50; September 7.

Robert D. Swiler, M.D., of Harrisburg; Jefferson Medical College, 1889; member of the Polyclinic Hospital staff; aged 58; September 15.

Roger S. Parry, M.D., of Washington; University of Pittsburgh School of Medicine, 1909; aged 32; September 2, committed suicide.

George D. Walker, M.D., of Erie; University of the South Medical Department, Sewanee, Tenn., 1906; aged 47; recently, of uremia and chronic nephritis.

Fred Remig, 14-year-old son of Dr. J. H. Remig, of Philadelphia; September 12, at the Howard Hospital, after having been run down by an automobile while playing on the street with some other children.

William A. Hitschler, M.D., of Philadelphia; University of Pennsylvania School of Medicine, 1892; until recently Professor of Laryngology and Rhinology in the Temple University School of Medicine; aged 56; September 1, at the Samaritan Hospital.

Orr H. Shaffer, M.D., of Miami Beach, Fla. (formerly of Altoona, Pa.); Jefferson Medical College, 1896; chief of Altoona Hospital staff and chief surgeon of the Pennsylvania Railroad Company from December, 1907, to June, 1919; aged 58; July 20, at Rochester, Minn., following an operation.

Thomas O. Cooper, M.D., of Wilmington, Del.; Hahnemann Medical College and Hospital of Philadelphia, 1896; former speaker of the Delaware House of Representatives; member of the Board of Education for twenty-three years; Federal inspector of drugs in Philadelphia for eight years; September 7, of heart trouble.

John C. Bucher, M.D., of Lebanon; University of Pennsylvania School of Medicine, 1884; son of the late Dr. I. Reilly Bucher and brother of Dr. Heister Bucher, of Reading; formerly medical examiner for the Metropolitan Life Insurance Company of New York, the United States Life Insurance Company, and the Pennsylvania Catholic Benevolent League; aged 63; September 6, of heart disease.

Judge George B. Orlady, of Huntingdon; aged 76; September 9, of heart disease. Judge Orlady was former presiding judge of the State Superior Court, in which court he served from 1895 until his resignation on account of ill health about two years ago. He was graduated from the Jefferson Medical College in 1871, and practiced medicine for two years, when he began the study of law, and was admitted to the Pennsylvania bar in 1875. Judge Orlady's father was Dr. Henry Orlady, a prominent physician of Huntingdon County.

Births

To Dr. and Mrs. Harold F. Lanshe, of Harrisburg, a son.

To Dr. and Mrs. John E. Marshall, of Lebanon, a son, June 17.

To Dr. and Mrs. Irwin Lape, of Lebanon, a daughter, in August.

To Dr. and Mrs. Karl J. Kurz, of Philadelphia, a son, Charles Henry, August 27.

To Dr. and Mrs Ralph Walters, of Harrisburg, a daughter, Verda Lee, September 11.

To Mr. and Mrs. Samuel Wright Mifflin, of Haverford, a daughter, Elizabeth Wright, August 9. Mrs. Mifflin is the daughter of Dr. and Mrs. Francis X. Dercum, of Philadelphia.

Engagements

Miss Honora M. Carr, of Overbrook, to Dr. John L. Lanshe, of Harrisburg.

Miss Nancy Drayton, daughter of Mrs. William Pepper and step-daughter of Dr. Pepper, dean of the University of Pennsylvania School of Medicine, to Mr. Samuel H. Gilbert, of Rydal.

Marriages

Miss Charlotte Morford, of Greenville, to Dr. Carl H. Bailey, of Sharon, September 1.

Miss Marian Flower, daughter of Dr. and Mrs. C. L. Howe, of Mercer, to Mr. William Albert Challener, Jr., September 16.

Miss Pauline Roberta Martin, daughter of Dr. and Mrs. Collier Ford Martin, of Philadelphia, to Mr. Russell Lee Whitney, June 17.

Miss Lily MacLeod, daughter of Dr. and Mrs. George I. MacLeod of Ardmore, to Mr. Robert Glendenning, Jr., October 2.

Miss Margaret MacVicker Smith, daughter of Dr. and Mrs. E. L. Smith, of Bedford, to Mr. William Foulke Satterthwaite, of Lansdowne, September 4.

Miss Mary Rose Magee, an assistant city solicitor of Philadelphia, to Dr. David W. O'Brien, an intern at St. Joseph's Hospital, Philadelphia, recently.

Miss Mary DaCosta Brick, daughter of the late Dr. Joseph Coles Brick and Mrs. Brick, of Ventnor, N. J., formerly of Philadelphia, to Mr. Thomas Biddle Kenilworth Ringe, of Germantown, recently.

Miscellaneous

Dr. Arthur King, of West Newton, visited in Europe during the past summer.

Dr. Robert Denison has been appointed chief resident physician at the Harrisburg Hospital.

Dr. and Mrs. Joseph Price Tunis, of Chestnut Hill, have returned from an extended trip abroad.

Dr. and Mrs. Herbert M. Goddard, of Philadelphia, have been spending some time in Europe.

Dr. R. J. Behan, of Pittsburgh, recently returned to his home after spending three months studying in European clinics.

Dr. W. J. Scanlan and family, of Shenandoah, has been spending some time touring the southeast and the Bermuda Islands.

Dr. and Mrs. Augustus A. Eshner and Miss Juliet Eshner, of Philadelphia, have returned after a ten-weeks' trip in Europe.

Dr. and Mrs. Joseph V. F. Clay, of Philadelphia, sailed recently for Europe, where they will visit Germany, France, and Switzerland

The fifth annual meeting of the American College of Physical Therapy will be held in the Drake Hotel, Chicago, October 18 to 23.

Dr. F. A. Rupp, of Lewistown, is a nominee for election to Congress from the 18th Congressional District at the coming election in November.

The Philadelphia Medical Emergency Corps offered its services to Governor John W. Martin, of Florida, during the recent hurricane disaster.

Dr. Byron H. Jackson, x-ray specialist of Scranton, has resigned from the staff of the State Hospital. He was connected with the institution for twenty years.

Henry R. Douglas, Jr., son of Dr. and Mrs. Henry R. Douglas, of Harrisburg, recently sailed for Edinburgh to study medicine at the University of Edinburgh.

The fifth annual convention of the National Association of Police and Fire Surgeons was held in Philadelphia September 21 to 24. About 80 members attended the meetings.

Dr. William S. Ruch, of Carlisle, has been appointed Coroner of Cumberland County. He fills a vacancy that had existed for four months since the death of Dr. Ambrose Peffer, of Newville.

Dr. William P. Brown has been appointed medical secretary on the staff of the Pennsylvania Tuberculosis Society. Dr. Brown comes from the Milbank Memorial Health Demonstration in Cattaraugus County, New York.

An endowment of $50,000, the gift of Dr. Henry I. Door, of Boston, to the Philadelphia Dental School of Temple University is the most recent addition to the Temple University $20,000,000 enlargement campaign fund.

A bequest of $5,000 to the German Society of Pennsylvania, to be used to establish a free bed in the Lankenau Hospital, was contained in the will of William Schoelgens, of Philadelphia, who died July 31 in Atlantic City.

A new children's ward at the Harrisburg Hospital, a memorial to Dr. Maud Conyers Exley, was opened September 7 with simple and impressive ceremonies. Speeches were made by the superintendent of the hospital, Mr. Frank Brooke, Dr. John B. McAlister, and the Rev. Philip A. Dales.

The $33,000 estate of Mrs. Martha E. Stockton, of Philadelphia, who died August 29, is devised in trust for the benefit of a son and daughter. Upon the death of the last survivor, the principal is to revert in equal shares to the Howard and Northeastern Hospitals, to endow free beds.

The Spanish government is sending a commission of physicians and other scientists to the United States to observe methods. Among those in the party are Prof. Obdulio Fernandez, professor of pharmacy at the Instituto Alfonzo XIII, and Prof. E. Moles of the Valencia Medical School. They will arrive this month.

Dr. Edgar Fahs Smith, former provost of the University of Pennsylvania, was presented the Joseph Priestley Medal by the American Chemical Society, in session at the Bellevue-Stratford, September 6-10, and was also honored with renewal of a Ph.D. degree presented fifty years ago by the University of Goettingen, Germany.

Dr. and Mrs. George G. Harman, of Huntingdon, entertained the members of the Huntingdon County Medical Society and their wives with a chicken and waffle dinner at Helfrick's Inn at Allensville on September 8. After the dinner the physicians held their regular meeting on the lawn, and the Auxiliary met on the porch.

Plans to raise $100,000 as Philadelphia's quota in the $1,000,000 building-fund campaign for the Denver Tuberculosis Sanatorium were completed recently at a meeting of Jewish organizations in Philadelphia. Dr. C. D. Spivack, medical director of the sanatorium, said the money would be used to erect a pavilion for women patients and make improvements on existing structures.

The Robert Boyd Ward Fund, Inc., has given $80,000 to the American Institute of Baking for the organization and conducting of a Department of Nutritional Education in the interest of the public welfare. This amount completes a gift of $100,000, to assist the American baker in perfecting his knowledge of the materials he handles, and acquaint him with its potentialities.

Dr. H. L. Northrup, of Philadelphia, was elected president of the Homeopathic Medical Society of Pennsylvania at its sixty-third annual session held at Bedford Springs in September. Other officers named were Dr. Charles B. Hollis, Philadelphia, and Dr. John D. Kistler, Pittsburgh, vice-presidents; Dr. E. Roland Snader, Jr., Philadelphia, secretary, and Dr. Anna Johnston, Pittsburgh, treasurer.

At a meeting of the Philadelphia Association of Retail Druggists held in August the members were advised to be careful of their paregoric sales and narcotic prescriptions from physicians who happen to be without their printed blanks. It was the sense of the meeting that there is nothing in the regulations to stop the druggist from placing the copy of a narcotic prescription on the container.

The Harrisburg Polyclinic Hospital dedicated its new four-story, fireproof building and a new nurses' home, September 16, when a reception was held for the professional men of that community, and on September 18, when the general public was invited to the hospital. All departments of the hospital have been reorganized and the laboratories fully equipped. The project was financed by public subscription.

Seventy-nine medical students, members of the Cambridge University Medical Society, sailed from England, August 13, for a twenty-two day visit to hospitals and medical schools in the United States and Canada; they returned, sailing from New York, Sep-

tember 11, after having visited Baltimore, Washington, Philadelphia, New Haven, Boston, Montreal, Kingston, Quebec, and Toronto.

At the completion of its recent European Study Tour, the Travel Study Club of American Physicians elected Dr. Fred H. Albee, of New York, as president, Drs. Edward B. Heckel, of Pittsburgh, and John P. Lord, of Omaha, as vice-presidents, and Dr. Richard Kovacs, of New York, as secretary. Plans are being prepared for the next study trip, including the Central European countries—Germany, Austria, Czechoslovakia, Hungary, and Italy.

The United States Civil Service Commission announces the following open competitive examination: Physiotherapy Aide, Physiotherapy Pupil Aide, and Physiotherapy Assistant. Applications for the positions listed must be on file at Washington, D. C., not later than November 27. Full information and application blanks may be obtained from the United States Civil-Service Commission, Washington, D. C., or the secretary of the board of U. S. civil-service examiners at the post office or customhouse in any city.

The City Council of Philadelphia has made the following appropriations: $750,000 for a new administration building for the Philadelphia General Hospital, $1,250,000 for buildings and sewer work at the hospitals, $450,000 for a nurses' home at the Philadelphia General Hospital, and $450,000 for a nurses' home at the Institution for the Feeble Minded, an industrial building which will cost $75,000, an attendants' building at the Hospital for the Insane which will cost $100,000, and an antitoxin barn for the Municipal Hospital which will cost $80,000.

On Monday, September 20, the Philadelphia County Medical Society instituted a service of daily luncheons in the grill of its home, from 11:30 to 2:30. The Monday luncheons will be featured by fifteen-minute addresses by prominent laymen in various walks of life. All members of the society and their families are cordially invited to attend the Monday luncheons. The health talks for the public will be continued every Tuesday evening in the auditorium of the building. This will afford an idea of some of the activities that can be carried out in the home of a county society.

Dr. W. D. Coolidge, assistant director of the research laboratory of the General Electric Company and inventor of the x-ray tube which bears his name, has been awarded the Howard N. Potts gold medal for 1926 by the Franklin Institute of Philadelphia. The medal, to be formally presented on October 20th, is "in consideration of the originality and ingenuity shown in the development of a vacuum tube that has simplified and revolutionized the production of x-rays." In accepting the medal, Dr. Coolidge will present a paper on his new and powerful cathode-ray tube.

Dr. H. W. Mitchell, superintendent of the State Hospital at Warren, and Dr. Owen Copp, consultant at the Pennsylvania Hospital for the Insane, Philadelphia, on September 1, were invited to be members of the committee to investigate conditions at St. Elizabeth's Hospital, the Government's institute for the insane in Washington. Others asked to serve were George M. Kline, Massachusetts Commissioner of Mental Diseases; William L. Russell, of Bloomingdale Hospital, New York, and Dr. S. E. Smith, of Indiana University. The committee was proposed by Secretary Work as the result of recent criticism in Congress of St. Elizabeth's.

In honor of their sixtieth anniversary in the practice of medicine, a dinner was tendered Dr. C. B. Dreher, of Tamaqua, and Dr. E. H. Kistler, of Lansford, by the Coaldale Hospital on the evening of August 27. Dr. Dreher and Dr. Kistler have been consulting physicians to the hospital since it opened its doors. About 150 guests were present, including Senator William Vare, and the Honorable John S. Fisher, candidate for governor on the Republican ticket. Each of the honor guests was presented with a handsomely bound guest book in which were the signatures of the guests of the evening, and also to each was given a handsome clock, gifts from the doctors of Lansford, Coaldale, and Tamaqua.

Three hundred and seventy-six Medical Reserve Corps officers attended the Medical Field Service School at Carlisle the early part of September. The physicians taking the two-weeks' course of instruction submitted themselves to army discipline and lived under conditions of camp life. Classes took up five hours a day, drill an hour daily, and twice a day problems were done in the field. A battle demonstration was conducted, with bombs, airplanes, and smoke-screens. The R. O. T. C. students gathered up the "wounded," gave first aid, carried the "wounded" back to first-aid stations, and saw to their removal in ambulances to a hospital five miles in the rear. Map reading was taught and the locating of aid stations and hospitals and the laying out of ambulance routes—just as would be done during actual combat operations.

The Commonwealth Fund, philanthropic foundation established by the late Mrs. Stephen V. Harkness, is making studies in eleven northern and midwestern states to determine the location of the third rural hospital to be constructed under the coöperative program initiated by the Fund last February. The first institution is to be at Farmville, Va. The second hospital unit also will be in the South. When applications are approved, the Fund will give two thirds of the cost of construction and equipment, while the community gives one third and the cost of upkeep. In addition to her initial gift, Mrs. Harkness made subsequent donations to the Fund increasing the capital to $38,000,000. Child welfare and education have been the main aims of the Fund. In undertaking the new program for rural hospitals the Fund feels that it should help public health and medical practice in country districts. It is convinced that rural communities despite their obvious advantages, are often more unhealthy than cities.

The National Association of Retail Druggists held its twenty-eighth annual convention in Philadelphia September 20th to 25th.

The Association claims that its outstanding achievement last year was securing the reduction in the tax on alcohol used in the manufacture of medicine, food, and other articles in which grain alcohol is used. The war tax has been reduced fifty per cent, effective January 1, 1928, a 25-per-cent reduction taking effect January 1, 1927.

The druggist was scored who deceives the public by resorting to the advertising of cut prices for the deliberate purpose of defrauding the public by the sale of other articles at exorbitant prices.

As a matter of necessity, druggists were urged to get into politics, or get out of business, as laws are being made and enforced too much for political effect, and too little for the public welfare. It was stated that experience at Washington shows that those who participate in politics most, receive most consideration at the hands of Congress and the executive branch of the Federal Government.

The proposed change in the prohibition laws which has passed the House of Representatives, by which a special commission would be appointed for the enforcement not only of the liquor laws, but also of the Harrison Narcotic Act, was criticized. The opinion was expressed that the proposed amendment is a subtle movement on the part of the general counsel for the Anti-Saloon League, to become the czar of prohibition enforcement.

It is estimated that about twenty-five years ago there were twenty-five chain drug stores, and now there are approximately 2,173 in this country, which do about 17 per cent of the drug business, and have forced the retail druggists to form the greatest organization known in the business, the coöperative association, the largest branch of which is located in Philadelphia. It is considered that the chain drug store is a menace to the

neighborhood drug store. In order to overcome the evil effects of the chain drug store, it would seem advisable to have the Kelly Bill, or some similar measure enacted. The object of this bill is to protect the public against misleading advertising and dishonest merchandising, and the present system of fraudulent imposition on the public in the distribution of trademarked articles which has developed under existing laws.

Prospective Philadelphia hospital construction will be large, according to reports in building circles. Undoubtedly the greatest project at this time is the hospital building planned for erection at Eighteenth and Lombard Streets for the Medico-Chirurgical College, Graduate School of Medicine, University of Pennsylvania. The proposed structure will have accommodations for 450 patients. New plans are being prepared for a group of three hospital buildings at Thompson, Eighth and Franklin streets for St. Luke's and the Children's Homeopathic Hospital. It is understood that the new structures will be nine stories, eight stories, and six stories of various dimensions. There will be a main hospital building, a maternity building, nurses' home, and power house. Estimates were received for the erection of a nurses' home at 8815 Germantown Avenue for the Chestnut Hill Hospital. The proposed structure will include three stories and a basement. It is understood that the Howard Hospital, at the southeast corner of Broad and Catherine Streets, contemplates the erection of new hospital buildings. The project is only in the preliminary stages, however, so far as construction plans are concerned, and it is not known at this time what the sizes of the various buildings will be. The Philadelphia Home for Incurables, at Conshohocken Avenue west of Belmont Avenue, also plans a new hospital building. The contract for alterations and additions to the Episcopal Hospital, Front Street and Lehigh Avenue, which will cost $50,000, has been awarded.

Research on Surgical Supplies

According to Dr. E. R. Weidlein, Director, Mellon Institute of Industrial Research, University of Pittsburgh, the firm of Johnson & Johnson, manufacturer of surgical supplies, New Brunswick, N. J., has established at the Institute a fellowship that will study the exact requirements of surgeons and other medical specialists in the way of sundries, with the joint aim of developing new supplies that are needed and of standardizing the products now in use. An investigation will also be made of the processes of renovating used supplies, and several other industrial fellowships of the Institute will coöperate in devising satisfactory procedures.

Dr. Frederic H. Slayton (M.D., Rush Medical College) will be in direct charge of this comprehensive research. The fellowship will be operated in a totally unbiased and independent manner, in accordance with the Mellon Institute system, and all its investigations will be conducted primarily for the benefit of the public. It is the plan to report the results in appropriate periodicals as the various phases of the studies are concluded. In carrying on this work, Dr. Slayton and the Institute's executive staff invite the concurrence of all interested organizations. They are especially desirous of securing the close collaboration of hospital executives and of members of the medical profession.

New Cancer Laboratory

A modern cancer research laboratory will be opened in the near future by the Scientific Committee of the recently organized New York Cancer Association. The top floor of an eight-story building at 250 West Forty-Ninth Street, New York, has been leased for the laboratory, and plans have been drawn under the supervision of Dr. Isaac Levine, director of the association. The cost of improvements will be $75,000. A budget of $108,000 for the first year has been planned. The laboratories will have 7,500 square feet of floor space. There will be a lecture room with a seating capacity of 150, a publication office, a laboratory for the scientific director, and separate laboratories for physical chemistry, biology, radium, bacteriology, high voltage x-ray therapeutics, experimental physics, organic and inorganic chemistry. There will be a staff of about thirty-six, including twelve research workers besides the technical assistants. The Scientific Committee in charge of the undertaking includes, in addition to Dr. Stewart, Dr. Barnet Joseph, representing the New York City Cancer Institute; Dr. Samuel A. Brown, dean of the Medical School of New York University; Dr. Holmes C. Jackson, dean of the Dental College of New York University; Dr. Alfred T. Osgood, professor of surgery at New York University; and Dr. William H. Park, director of laboratories of the Department of Public Health of New York City.

The Dental Congress

Philadelphia, proud of its preëminence in a science no less important to the welfare of the human race than medicine and surgery, welcomed from all parts of the world the members of the Seventh International Dental Congress, held in Philadelphia in honor of the Sesqui-Centennial observance. The Congress was in session from August 23 to 27. Without doubt, it was the greatest Dental Congress ever held. It was convened in the dental school of the University of Pennsylvania. Its importance and thoroughness may be better understood by the fact that the scientific activities were divided into fifteen sections.

It was peculiarly appropriate that the dentists of the world should meet in Philadelphia because this city has long been famous for its schools of dentistry. It is said that "to be mentioned as a Philadelphia dentist is almost as complimentary as being referred to as a Philadelphia lawyer."

Philadelphia's leading part in the teaching of dentistry, in the research and discoveries incident thereto, and in the manufacture of the appliances used in the dental profession, is recognized by the entire world.

The Congress was held under the patronage of the President of the United States, with the official participation of the United States Government. Provision to this effect was contained in a Congressional resolution carrying an appropriation for the reception of the foreign visitors and for the participation of the United States Public Health Service and the United States Army and Navy Dental Corps. Congressional action also authorized President Coolidge to hold a State reception for the delegates in Washington at the close of the meeting in Philadelphia.

The international assembly of dentists at Philadelphia is the first since 1914, when the declaration of war between Germany and England cut short the meeting then in progress in London. It was the first congress held in this country since the meeting in St. Louis in 1904.

The address delivered by Assistant Secretary of State J. Butler Wright, who welcomed the foreign delegates in the name of President Coolidge, urged a better understanding by foreign nations of America and her attitude toward the international questions in which she is directly involved. The speaker stated that this country is particularly interested in oral hygiene because it believes itself to have been the real pioneer in this all important work, and stressed the marked advance that has been made in dental hygiene in industry. He considered the most important thing that he could say to them, if he may style it important, was to urge the continuance and enlargement of the system of educating foreign students in American dental schools as a means of fostering international good will and friendship. Secretary Wright addressed the Spanish and French delegates in their native tongues in concluding his appeal for a better perspective of the United States among foreign powers.

In the address of welcome by United States Senator Henrik Shipstead, who is himself a dentist, it was urged that the dental curriculum include a course in applied dental chemistry, devoted to the chemistry of

such subjects as dentrifices, their composition, and their action.

Among the important matters emphasized by the delegates may be mentioned the following: The American dental profession has been altruistic in its efforts to teach oral hygiene, realizing that this would tend to eliminate dental service. More pulpous teeth are extracted without reason than there are teeth that are extracted with reason. Political tampering with the profession was criticized. Unwise legislation formulated for political reasons has hindered the dental profession. Difficulties in procuring national and international laws affecting dentistry were enumerated. Legislation affecting the professions in Illinois already has permitted several scandals, and is as yet uncorrected. Creation of a nonpartisan research board to advise national and state lawmakers was suggested.

During the week previous to the convening of the Dental Congress at Philadelphia, the first International Orthodontic Congress was in a five-day session in New York City. During the Congress, the American Dental Hygienic Association, comprising 1,000 women employed as assistants to dentists, also held a convention, at which time research work and means of preventing dental troubles were discussed.

BOOKS RECEIVED

THE DUODENAL TUBE AND ITS POSSIBILITIES. By Max Einhorn, M.D., Professor of Medicine at the New York Postgraduate Medical School. Second edition, revised and enlarged. Illustrated. Philadelphia: F. A. Davis Company, 1926. Price, $3 net.

PRACTICAL MATERIA MEDICA AND PRESCRIPTION WRITING. By Oscar W. Bethea, M.D., Ph.G., F.C.S., Professor of Clinical Therapeutics, Tulane School of Medicine. Fourth edition revised. Illustrated. Philadelphia: F. A. Davis Company, 1926. Price, $4.50 net.

THE TREATMENT OF FRACTURES. By Charles Locke Scudder, A.B., Ph.B., M.D., F.A.C.S., Consulting Surgeon to the Massachusetts General Hospital; formerly Assistant Professor of Surgery at the Harvard Medical School. Tenth edition, revised. Octavo volume of 1240 pages, with 2027 illustrations. Philadelphia and London: W. B. Saunders Company, 1926. Price, $12 net.

A PRACTICE OF PHYSIOTHERAPY. By C. M. Sampson, M.D., formerly of the Physiotherapy Service, Walter Reed U. S. Army General Hospital, Washington, D. C. 146 illustrations. St. Louis: C. V. Mosby Company, 1926. Price, $10.

THE SURGICAL TREATMENT OF GOITER. By Willard Bartlett, A.B., A.M., M.D., D.Sc., F.A.C.S., St. Louis. Foreword by Dr. Charles H. Mayo, Rochester, Minn. 130 original illustrations. St. Louis: C. V. Mosby Company, 1926. Price, $8.50.

ESSAYS IN THE HISTORY OF MEDICINE. By Karl Sudhoff, M.D., Professor of History of Medicine in the University of Leipzig, 1895-1924. Translated by various hands and edited, with foreword and biographical sketch, by Field H. Garrison, M.D., Lieutenant Colonel, Medical Corps, U. S. Army. New York City: Medical Life Press, 12 Mt. Morris P'k. West. Price, $5, postpaid.

PRACTICAL DIETETICS IN HEALTH AND DISEASE. By Sanford Blum, A.B., M.S., M.D., Head of Department of Pediatrics, and Director of the Research Laboratory, San Francisco Polyclinic and Postgraduate School. Second revised edition. Philadelphia: F. A. Davis Company, 1926. Price, $4 net.

DEFECTIVE MEMORY, ABSENT-MINDEDNESS, AND THEIR TREATMENT. By Arnold Lorand, M.D., Carlsbad, Czecho-Slovakia. Philadelphia: F. A. Davis Company, 1926. Price, $3 net.

A MANUAL OF PROCTOLOGY. By T. Chittenden Hill, Ph.B., M.D., F.A.C.S., Instructor in Proctology, Harvard Graduate School of Medicine; Surgeon to Rectal Department, Boston Dispensary. Second edition, thoroughly revised. Illustrated with 101 engravings. Philadelphia and New York: Lea & Febiger, 1926. Price, $3.50.

A GUIDE FOR DIEPETICS. By Walter R. Campbell, M.A., M.D., Department of Medicine, University of Toronto, and Toronto General Hospital; and Mame T. Porter, B.Sc., Dietitian, Toronto General Hospital. Baltimore: Williams & Wilkins Co. Price, $2.50.

PLASTIC SURGERY OF THE HEAD, FACE, AND NECK. By H. Lyons Hunt, M.D., L.R.C.S., (Edin.), Licentiate of the Royal College of Physicians, Edinburgh Licentiate of the Faculty of Physicians and Surgeons of Glasgow. Illustrated with 342 engravings and 10 colored plates. Philadelphia and New York: Lea & Febiger, 1926. Price, $7.

METHODS AND PROBLEMS OF MEDICAL EDUCATION. Fifth series. Division of Medical Education, the Rockefeller Foundation, 61 Broadway, New York City, 1926.

MEDICAL DICTIONARY. By Thomas Lathrop Stedman, A.M., M.D., Editor of the *Twentieth Century Practice of Medicine*. Ninth, revised edition. Illustrated. New York: William Wood & Company. Price, $7.50.

BOOK REVIEWS

From a reviewer we expect information and advice which will guide us safely and to our profit, warning us of the poor, the mediocre, the commonplace, and inviting our attention to merit.

PERNICIOUS ANEMIA. By Frank A. Evans, M.D. Published by Williams & Wilkins Co., Baltimore, Md., 1926. Price, $2.50.

In this work, one finds a digest of the present published facts concerning pernicious anemia. Considerable discussion is found under the heading of etiology, without any definite conclusions. The anemias of Dibothryocephalatus, sprue, and of the horse (which is probably due to the bite of a fly), are considered in a comparative way with pernicious anemia. Dr. Evans feels quite certain that in the final analysis of the etiology some abnormality of the fat metabolism will be found to play a part. Foci of infection, while, according to the author, probably playing no part in pernicious anemia, should be removed for the good of the patient. Under the chapter on treatment, one who has had much experience will be disappointed to find the author in doubt as to whether or not blood transfusion can be shown to prolong life.

CLINICAL PEDIATRICS, by John Lovett Morse, A.M., M.D., Professor of Pediatrics, Emeritus, Harvard Medical School; Consulting Physician at the Children's, Infants', and Floating Hospitals, Boston. Illustrated. Philadelphia and London: W. B. Saunders Company, 1926.

Any one familiar with the work of the author, especially as a teacher, a consultant, and an active participant in the meetings of Pediatric Societies throughout the country, could not but expect something out of the ordinary when undertaking to read a book written by such a man. One has but to read the preface to realize the following pages will undoubtedly contain just what was anticipated; i. e., original ideas, based on an extensive experience, expressed in the way for which this author is so well known.

It is a real treat to read a book written by a man who does not hesitate to desert and ignore the beaten path, and lay out one for himself. Only many years of unusual and unlimited experience, with the courage of one's own convictions, make this possible, and page

(Continued on page xiv.)



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BOOK REVIEWS

(Concluded from page 48.)

after page of this book prove conclusively that the author is such a man, and has had such experience.

It is particularly interesting to note the stress that is laid on the value of physical examinations of children, rather than calling attention to elaborate laboratory methods, valuable though they be, but impossible, as they frequently are, to the general practitioner. The subject of differential diagnosis, admittedly one of the most important points in medicine, especially in children, is dealt with in a most interesting and instructive way, only such symptoms beng referred to as of value when commonly present in one condition.

The illustrations are excellent, and the work, from the publisher's standpoint, all that could be desired. The book, in short, contains the latest and best of everything in pediatrics to date, written in a most interesting and instructive way, and based almost exclusively on the actual experience of the author, instead of, as in so many cases, being largely copied from books already in existence, a fact to which the author gives attention in his preface only to discourage. No library should be considered complete without this book on its shelves, no matter whether it be the library of a general practitioner or a specialist.

HAY-FEVER AND ASTHMA. A practical handbook for physicians and their patients. By Ray M. Balyeat, A.M., M.D. Illustrated. Published by F. A. Davis Company, Philadelphia, 1926. Price, $2.00.

The author uses simple terms to develop his thesis. Some of his statements may be questioned, such as that on page 68: "True asthma in children is usually unrecognized, as it appears in the form of a peculiar type of croup." The book is loosely written, the author using "cases" and "patients" interchangeably. Some of the ordinary rules of grammar are not observed. It will probably serve the purpose of convenient information to the laity, but from a scientific standpoint is not an especially authoritative work.

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SOME PROBLEMS IN MODERN MEDICINE*

WENDELL C. PHILLIPS, M.D.
NEW YORK, N. Y.

I am not unappreciative of the privilege which has been given me of attending this meeting, and I must congratulate the Medical Society of the State of Pennsylvania upon its organization and upon the methods by which it carries on its work. I belong to a state society of no mean size—the Medical Society of the State of New York—and I am pleased to bear this tribute to your Society: that in our efforts to reorganize, we adopted many sections of your Constitution and By-Laws.

It is manifestly impossible for a man holding the position I do, and bound up as I have been for the past nine years as trustee, president-elect, and now president of the American Medical Association, to attempt to speak of all the needs of the medical profession in a short address, but there are one or two points that the signs of the times indicate are necessary for us as medical men to take into serious consideration. I shall first have a word to say regarding medical education, so concisely put to you by your president in his address.

Many physicians advocate a lowering of the standards of medical education. With that I cannot agree. We cannot give a medical student too much scientific medicine. It is the business of the undergraduate medical school to educate the students as practitioners in medicine. We are teaching the *science* of medicine right, but I question whether we are inculcating in the mind of the medical student those principles of the *art* of medicine that they should have.

I hope I catch what ought to be the spirit of the general practitioner of medicine today. There is no higher place in the whole realm of medicine than that of the man who has the privilege of entering into the homes and hearts of the people as we specialists never do. My first entry into the study of medicine was in the office of an old-time practitioner in a town of about 1,500 inhabitants. I did what they used to call "read medicine" with him. The reading did not amount to very much so far as learning any real medicine was concerned, but in riding with him through the country I saw how he carried into the homes something beside the science of medicine.

The day of the preceptor has gone, but the necessity for what the students learned from the preceptor remains the same as it was then. Are the undergraduate medical schools today furnishing that something to the medical student that he needs in order that he can do what he ought to do in the homes of the people where he goes? My plea is this: that these schools teach the art as well as the science of medicine, that they give more attention to inculcating the spirit of medicine. I may be wrong, but as I study the younger practitioners today, I am sure I find in them just a little lack of what we can best term the "art of medicine." Do you recall that our forefathers never spoke of medicine except as the "science and art of medicine"?

As remarked above, it is the business of the undergraduate school to educate young men to become general practitioners, and that is as far as the undergraduate medical school should go. But the curriculum must provide study of preventive medicine and hygiene, and instruction in how to teach the principles of personal and community health. With such an education, the practitioner should be able to handle, without the aid of a laboratory, without the aid of a hospital, without the aid of specialists, 80 per cent of all the cases that come to him. When the young man can be properly educated to assume his new duties, a new type of practitioner certainly must come into existence.

The family doctor of today has very few cases of diphtheria, scarlet fever, or typhoid, and almost no typhus, smallpox, or other contagious diseases. The day of preventive medicine has come, when the physician must assume his place as a teacher of this art and should be qualified for such a work. The foundation of

*Address by the President of the American Medical Association delivered before the General Meeting of the Medical Society of the State of Pennsylvania, Philadelphia Session, October 12, 1926.

medical practice is the family practitioner. Our great leaders in medicine have emphasized this fact, and that the medical profession must meet new demands in such a manner as to prevent the development of so-called state medicine. The doctor must make such painstaking personal contact with his individual patients that no other form of medical practice will be permitted by the layman himself.

We have come to that point where the doctor must come out of his shell of silence, so to speak, come out into the community in which he lives, and assert himself as the one man who is fitted by education, training, and tradition to be the expounder of public-health education. We are being criticized because we have not taken that stand. One of the great New York dailies not long ago said that the only source from which can come education in regard to public health is the medical profession, and yet that profession today is the most tongue tied of all the learned professions. The physician should be master of the health situation in his community, and should assume his responsibility and openly teach the public the gospel of good health and preventive medicine. This is a work for the family physician; he must to some extent be a health administrator. His chief rôle in the future will be to keep his patients well.

Obviously such service can be made possible only by maintaining intimate clinical information, properly recorded, regarding every man, woman, and child who seeks his services, and every individual in every community should have his health record on the files of his family physician. Many there are who worry through life in fairly good health, and while they accomplish their daily duties, they never know the happiness of perfect health. Hence, one of the goals of the future practitioner of medicine will be the attainment and maintenance of that good health which is the inherent right of every person. A higher average of good health means a higher average of happiness, comfort, usefulness, and economic value of the individual. The superman will never materialize without superhealth.

I appreciate how some of you who perhaps have not thought deeply on the subject may feel —that such a scheme is impossible from an economic standpoint. How are we going to live and maintain ourselves if we spend our whole life in keeping our patients well? But did you note that the scheme as I have outlined it means that the future doctor must keep files of his periodic health examinations? The patients will come to appreciate the knowledge contained in their individual records, and will, under the stimulus of acquired health education, seek the physician far more frequently. The public today is looking upon this type of service as a service of financial value, and is ready to pay for it. The thing we must do is to get our general practitioners to assist in this responsibility, keep these records, and keep control of these patients.

Periodic health examinations are being made by many industrial organizations. The National Safety Council is made up of 4,200 industries. I am to address that organization the last of this month, and expect to make a plea that all periodic health examinations shall be made by the family physician, and if any organization wants to know anything about the physical condition of an employee, it should apply to the family doctor for the needed information.

But if the family doctor fails to assume this responsibility, then his patients will seek these examinations from other sources. The public is becoming educated to the fact that they are a necessity, and are demanding them. Health examination is a service that should be charged for, because the people surely would rather pay for keeping well than to pay to be made well after becoming ill. I really think the financial condition of the future practitioner will be better than before.

How is this work of personal and community health education to be financed? We know that millions of dollars are spent annually for the salvaging of humanity, and that a large proportion of these illnesses are preventable. These millions of dollars could be turned into health-education channels. The time has come when some great foundation or a combination of great foundations with great financial backing should be devoted solely to public, personal, and community health education. I hope that time is about here, and there are some signs that such a millennium is not far away.

In closing, I want to leave with you a few suggestions that seem to me more or less important. The scheme of undergraduate medical education should be reconstructed to include in the curriculum as a permanent feature the science of health conservation and the art of employing the principles of the science of medicine through the personal relationship of the physician with his patients. The student must be trained today to treat his patients from the standpoint of health as well as of disease.

Public-health education is the outstanding need of the hour. The gospel of personal and community health is complex, and the health department will never reach its highest efficiency

until it includes a maximum of direct personal inspection by the properly qualified family physician. The patient of the future, in view of his better health education, may be expected to derive from it a wise judgment that will lead him to seek advice and counsel from his personal physician. Furthermore, in view of our perfected system of individual and community health education, cults and other menaces to public health which are founded on theories for the most part baseless and futile, will gradually disappear. The ideal family physician of the future, from training, experience, and expert knowledge of health conservation, will derive a potential power which will qualify him to control health problems in most instances.

The family physician of the future must have proportionate representation in the councils of his profession. No specialty or combination of specialties, not even general surgery, should be permitted to dominate the health affairs of a community or of a patient. It is true that the services rendered by a physician may not be considered in terms of finance, but in no sense should the physician of the future offer this as an excuse for slothfulness in the performance of business affairs. The maintenance of the general practitioner, the family physician, is of the utmost importance for the survival and continuation of the family home as the foundation of the nation.

PATHOLOGY AND MEDICINE*†

HOWARD T. KARSNER, M.D.
CLEVELAND, OHIO

Clarity will be served by defining the position of pathology in the field of medicine, because discussion is now active as to whether this subject should be regarded as a fundamental science, such as anatomy and physiology, or as an applied science directly concerned with the clinic. Pathology collects facts, and organizes and correlates them in the manner of science. It takes its place in general biology in the consideration of disease in man, lower animals, and plants, and thus enjoys a far-flung activity. Its methods of observation are those of the biologist, the anatomist, the histologist, the physiologist, and the biochemist. The postmortem examination is the dissection method of the anatomist, modified in so far as the exigencies of circumstance demand. The preparation of tissues for microscopic examination is that devised by the histologist and modified to suit differing circumstances, especially the need of the clinician for an early report. The methods of physiology, biochemistry, bacteriology, and immunology are taken over without change. The pathologist, therefore, can lay claim to no method which is strictly and solely his own.

The argument as to whether pathology is to be regarded as pure or applied science may have little interest for the clinician until he realizes that the conclusion is of direct importance in the manner of his education and in the prosecution of his practice. Pathology regarded as a fundamental science may withdraw farther and farther from the immediate needs of the clinic. Pathology regarded as applied science becomes more closely interwoven with the clinic as training is extended and mutual coöperation is developed. The clinician with a proper conception of the work of the laboratory, its limitations, and sources of error, must be matched by the pathologist with an understanding of the difficulties which attend the diagnosis and treatment of disease in the living patient. Sympathy and harmony between these two are essential to the progress of medicine. If we, as doctors of medicine, have at heart the proximate needs of medicine, the pathologist of the medical school and of the hospital, as well as he who serves the private practitioner, must view his field as contributing directly to medicine. He must seek his work among the living as well as the dead. His problems deal with the nature of disease, problems suggested by the clinician and by himself, the solution of which may be reached independently or in coöperation. He must recognize that applied science depends upon broadening the field of pure science and therefore continuously look to the physicist, the chemist, the biologist, the anatomist, and the physiologist for the enriching information which they alone can supply. The fact that certain pathologists, by virtue of inclination, training, and situation, pursue investigations along lines which are purely scientific, does not alter the general proposition. To be successful, the investigator must follow his interests, and it is well for medicine that research in pathology has become widely diversified.

The matter may be summed up by quoting Sydenham. "We can indeed conceive that there might be, and to some extent there already is, a science of disease as a branch of biology without any direct relation to the art of healing. But such a science, if not recognizing the great ethical principle of our profession to relieve human suffering and minister to the welfare of mankind, would lose its mainspring of action.

"It would be a loss rather than a gain were

* Read before the Section on Medicine of the Medical Society of the State of Pennsylvania, Philadelphia Session, October 12, 1926.

† From the Department of Pathology, School of Medicine, Western Reserve University.

pathology to live in laboratories and museums like a cloistered recluse, not breathing the common air of the medical world."

INVESTIGATION

For purposes of discussion, the topic under consideration may be taken up as it affects investigation, teaching, and practice. In all these aspects, pathology may be regarded as a more or less pure science, and as an applied science. In a general way, pathologic changes in form, or pathologic anatomy, may be regarded as the pure-science phase of the subject and pathologic changes in function as the applied-science phase. This is not a hard and fast rule, because exceptions may be noted. As with science in general, so with pathology in particular, enlargement of the field of fundamental knowledge may at any moment provide the basis for a most important practical application. Who could have foretold that the discovery by von Mering and Minkowski that removal of the pancreas in animals produced diabetes, would be of value to man? The studies of Opie, Weichselbaum, and others on the pancreas in diabetes were welcomed as of great value, but only in so far as they contributed to knowledge of the subject. Yet these and other studies in a relatively pure scientific field formed the groundwork upon which the discovery of insulin was based.

As with research in any field, that in pathologic anatomy may seem abstract and without clearly perceived value. Nevertheless, much of our information concerning the disease processes in life depends upon a knowledge of the changes in form that occur in various viscera. It is by pathologic anatomy that many diseases are identified, and without the information obtained in this way etiology may remain obscure. Without knowing its features in man, it is impossible to say that a disease has been produced in animals. One has merely to recall the confusion that has arisen in the study of epidemic encephalitis. A similar lesion was found in the brains of animals following inoculation with material from human encephalitis, but soon reports were made to the effect that such a condition may be found in animals not the subject of experiment. More careful study demonstrated that the non-experimental lesion has features which distinguish it from the experimental disease, a triumph for pathologic anatomy in the elucidation of a problem in etiology.

While augmented by physiologic studies, many of the notable features of cerebral localization have found their basis in pathologic anatomy. With the development of histology, the microscope has given an enormous amount of information. It would be of interest to know what the lamented Bichat would say to the present status of the science his genius established. In the last decade pathologic histology has given evidence of the vitality about which some have been skeptical. Noteworthy is the contribution relating the microscopic features of tumors of the glioma group to prognosis, and the same principles seem to be applicable to tumors of the breast, the lip, and the uterus.

There are, however, many other problems awaiting explanation which seem to have their solution largely in anatomic studies. Heart block is obviously due in some instances to destructive disease in the conduction system, but in others the cause cannot be found. This and other disturbances of cardiac rhythm and function are well studied physiologically, but the essential disturbance is often obscure. It may be that when the final answer is given, many facts in morbid anatomy, now well known, will fit into the picture. Yet it is probable that new methods of study will have to be devised. Thus, methods of fixation and of staining may furnish the necessary clue. Perhaps an entire revision of histochemical technic may be needed.

For these reasons, we seek "the living among the dead," and as Montaigne is reported to have said, "nature makes us see that many dead things have yet certain secret relations to life."

Enough has been said to indicate that pathologic morphology, rich as have been its contributions, has much to add, and that further investigations in this field are necessary to the progress of medicine.

In his Harveian oration in 1912, Sir James F. Goodhart said "The time has come when it seems worth while to insist that all the work upon the foundations, whether it be anatomical, histological, chemical, physical, has, unconsciously perhaps, but none the less inevitably, been ushering in another point of view than that from which we started, and the latest phase of pathology is this more intricate one that concerns itself with the investigation of function." At that time Goodhart thought that pathology was "leaving its *terra firma* of morbid anatomy," but happily this assumption has not been justified by the later progress of the subject. Pathologic anatomy always has been and, by the nature of things, must always continue to be the solid rock upon which our house is built. Essential to the study of pathologic physiology is the information provided by the studies of normal function, for without a knowledge of the normal, investigations of the abnormal are pointless. In certain fields, as has been noted, the study of abnormal function has gone beyond the sphere of information as to abnormal form, but for the most

part the two have been more or less closely correlated.

Great progress has been made in regard to numerous diseases, perhaps most notably in the nonsuppurative lesions of the kidney. For many years the pathologic anatomical lesions of the kidney have been studied, and the result was a classification difficult or impossible of correlation with the clinic as regards finer details. Many studies of abnormal function were made, but not until the simplification of technic offered by the micro-methods of blood examination and the use of test dyes was it possible to bring about any reasonable correlation. Now, however, by the utilization of results obtained by studies in morphology, function, and clinical manifestations it has been possible to establish a systematization of renal lesions far more satisfactory than any previously devised. The coöperation of the pathologist interested in function, the physiologist and biochemist interested in the abnormal, and the clinician interested in alterations of both form and function has been necessary to achieve this end.

Rickets, anemias, liver cirrhosis, stomach lesions, diseases of the central nervous system, and numerous others are being attacked by examination into both form and function. Investigations are being made by some pathologists on the basis of form, by other pathologists on the basis of function. It is needless to recite the contributions of workers in other fields, well known to any familiar with recent medical literature. Nor is it necessary to point out that experimental pharmacology and applied therapeutics, to be rational, are based upon the information thus provided.

As an example of what the future may disclose, investigation into the nature of intestinal movement may be noted. Although the diarrhea of intestinal lesions is in part a protective mechanism, nevertheless, the condition in its extreme is often exhausting and in this way may defeat its apparent purpose. Investigations are being conducted in our own laboratory with the object of clarifying the mechanism of excessive peristalsis in certain intestinal diseases. If this be due, as seems probable, to the toxins elaborated by the bacteria concerned, it may well be that a satisfactory antitoxic substance may at the same time relieve harmful diarrhea and combat other toxic manifestations of the infection.

Of similar interest are problems concerning the methods of operation of generalized peritonitis, especially as to how it produces symptoms and death. For by an understanding of these phenomena a method of relief may be obtained.

These examples will show that the study of abnormal function is in essence the applied phase of pathology, in distinction to the more academic aspect of pathologic anatomy. Bacteriology and immunology, closely related to pathology, and in certain respects inherent in the conception of pathology, represent additional fields in which the pathology of function is to be studied. The broadest interests of medicine are served by investigations in all these fields, overlapping to a considerable degree and often requiring the coöperation of several individuals specially trained along certain lines, in order to reach fruition.

Teaching

In the medical school, pathology is given in a more or less formal course, and repeated and amplified in most of the separate clinical courses. It behooves the teacher of pathology to know the broad principles of the subject and the teachers of the clinical subjects to know the application of these principles in the special fields. Pathology, then, is not a subject for any particular year, but is to be found throughout the entire medical course.

With the present trend of education, the medical student has had two or more years of college work. The medical work, then, is to be regarded as graduate education and the methods adjusted accordingly. In principle and indeed in practice, it is doubtful that such a subject as pathology can be taught. Rather, the aim of the teacher should be to direct and aid the student in learning, and for this purpose he should place at the disposal of the student materials suitably prepared, books, and a point of view.

The teaching of pathology can be made objective almost entirely. There is a serious question concerning the amount of technical work desirable in the course, and this problem is one that involves an educational principle. It must be admitted that the skilled pathologist has a background of unquestioned value in the practice of medicine. It would be ideal if all practitioners had, in addition to high personal qualifications, a scientific viewpoint and ability in the various aspects of diagnosis and therapy, also a complete familiarity with all the preclinical sciences. Except possibly for the rare encyclopedic mind, this ideal is unattainable. It is essential that students enter the practice of their profession before the waning powers of senility overcome them. Our methods wisely limit the period of preliminary medical training to five or six years. A curriculum is devised for this period of years, so arranged as to provide a more or less suitable time division and sequence of studies. In no instance is the allotted time sufficient for complete training in a given subject. Therefore,

the teacher must decide at once the purpose which can best be served in the time available.

This is neither the time nor the place to discuss when a student should begin to specialize, nor to argue the merits of specialization. Neither does time permit us to consider the interesting suggestion that certain medical schools be set aside to train investigators in medicine. Suffice it to say that research in medicine must obviously depend for its success upon a comprehensive insight into the field of medicine and its background. Reduced to the simplest terms, the purpose of the medical school is to provide the essential training which will fit a student to begin the practice of medicine.

In each subject there is a cultural value in training a student to think logically. There is also a content value, essential to his technical education. The cultural value depends entirely upon the point of view of the instructional staff and the receptivity of the student, and may be as well developed in a course of fifty hours as in one of a thousand hours. The content value is that element which must be adjusted to the time available. In this adjustment, the objective of the whole medical course must be considered. It seems reasonable to state, therefore, that each subject, preclinical or clinical, must be conducted with the sole idea as to how it may best suit the purpose of the school in training the students for the practice of medicine.

To make the problem more concrete, the instructor in pathology must determine the relative value of certain technical procedures, as for example the mounting of sections, to the more elaborate study of the subject proper. Putting it in other words, he has to determine, always with the main objective in mind, whether a half hour is better spent in mounting sections or in studying material already prepared. He must determine how far he should go in training in postmortem technic as compared with the study of the material revealed by the examination. He must decide the relative utility of museum technic as against the study of the specimens. This need not be interpreted as a condemnation of instruction in technical methods. Ludwig said "die Methode ist Alles" (method is everything), and we recognize that much in the way of advancement of knowledge is dependent upon improvement in methods. Nevertheless, skill in methods is the field of the special worker and, with temporal limitations, not that of the student of pathology who is looking to clinical fields. Nevertheless, the student needs a certain irreducible minimum of knowledge of technic in order to understand the material presented.

A further problem confronts the teacher of pathology. Again with the main objective before him, and with that broad conception of his subject which makes it include both abnormal form and function, he must decide in what manner to balance equitably the teaching of pathologic morphology and pathologic physiology. As normal anatomy is fundamental to medicine as a whole, so is pathologic anatomy fundamental to pathology. As normal anatomy is of significance as the basis of normal physiology, so is pathologic anatomy the basis of pathologic physiology, and pathologic physiology seeks to explain those alterations of function which are the heart and soul of clinical medicine.

In the school with which I have the honor to be associated anatomy is allotted about 1,000 hours and physiology 320 hours, to which might be added 224 hours for biochemistry—a total of 544 hours. Admitting that such a division is suitable, is it proper to assume on this basis that in the course in pathology two thirds of the time should be given to pathologic anatomy and one third to pathologic physiology? The answer is in the negative, for several reasons. The courses in normal anatomy are only slightly augmented subsequently by the clinical teachers. The same is true of physiology. Pathologic anatomy is also added to in only a limited degree except as concerns lesions visible externally and at operation. Pathologic physiology, however, is fundamental to clinical diagnosis, and the modern teachers of clinical subjects make constant reference to the abnormal physiology involved in the condition or case under discussion. Hence, pathologic anatomy must be covered as well as possible in the formal courses in pathology, whereas pathologic physiology may be neglected entirely, referred to only in the discussions of various topics, or experimental work supplemented by some clinical demonstrations may be introduced. Recognizing the time limitations imposed upon the instructor, the question arises as to whether or not pathologic anatomy can be in any degree curtailed to make way for some instruction in associated alterations of function. An additional factor is involved in the cost of equipment and material for student work in pathologic physiology. The solution of the problem must of necessity rest upon the personal opinion of the director of the department. It may well be that if pathologic anatomy be presented with its functional aspects always in mind, the bearing of the work on the student's ultimate career will be perfectly apparent. Nevertheless, medical education has set itself to the objective method of instruction, and if this be wise, as seems to us without question, pathologic physiology should be presented objectively.

It has been my privilege to be so situated in my teaching career that equipment was available for physiologic work. It has also been my good fortune to come under the ægis of men who have stimulated an enthusiasm for this type of instruction. Interest has led to the development of a sufficient technical ability in the methods of physiology to make such instruction feasible. Hence, I lay no claim to originality in instituting such a type of instruction or in devising the method of procedure. What we have done in this country is probably to be laid at the door of Cohnheim, whose influence has operated directly and indirectly through American disciples. One wonders how careers may be directed by contacts accidentally or purposely made. An incident in the life of Osler comes to mind in this connection. Trained in pathologic anatomy, he returned after a sojourn abroad to find himself in a well-equipped physiologic laboratory. His interest was in the morbid forms and their direct interpretation in clinical medicine, and so strong was it that he was not to be turned aside by utilizing all the equipment furnished him. It must be a matter of random speculation as to what might have happened had he permitted himself the use of this apparatus in the investigations which his fertile mind continually presented to him. Accident has made me the exponent of functional studies in pathology. My experience has led me to certain conclusions in this respect which are to be presented to you as they concern the teaching of pathology.

In summary it may be said that a course in pathology can be so conducted that a moderate amount of work in pathologic physiology can be included. It is admitted that this involves a certain sacrifice of time devoted to pathologic morphology, but concrete evidence furnished by the experimental method has a value in giving to the entire subject a functional aspect. This physiologic work may be planned as an extensive series of demonstrations prepared by the instructional staff, or may be participated in by the students. As part of the objective method of teaching, participation is to be preferred to demonstration, a feature fundamental to that method spoken of as progressive education, which, as has been pointed out elsewhere, is applicable in technical as well as general education.

Time, space, equipment, personnel, and technical limitations make it impossible for all students in pathology to take part in all experiments simultaneously. Therefore, a selection must be made of the topics to be covered. By rotation all the members of smaller classes and most of the members of larger classes can engage in the work. In the field of general pathology a small group of students may perform experiments in degenerations, particularly those that have to do with water imbibition, and report and demonstrate to their colleagues. In inflammation there are several experiments of fundamental importance essential to clarification of the nature of the process. In the study of tumors, work with the simpler phases of transplantation enables the student to grasp with a reasonable comprehension the modern studies on neoplasms. In special or systemic pathology, the application of the method furnishes numerous opportunities. The cardiovascular, respiratory, alimentary, and urinary systems offer excellent examples. Perhaps by individual propensity, perhaps because of the instructive value of the topics, our courses emphasize functional work in the cardiovascular and urinary systems.

Before explaining the method, another feature should be considered. Thinking of the student as potentially a physician, it may well be questioned as to whether or not the correlation of anatomic lesions in human and animal material with functional disturbances in animals is adequate. Our answer is that it may be amplified by a study of closely related clinical cases.

In offering our solution of the problems, the scheme is given, not as a series of directions to be followed, but as an example of what can be done. It is not fanciful but actually practiced. In the study of heart disease, five students are called to the small room equipped with physiologic apparatus. A chief operator is selected, and assigns his fellows to such special tasks as anesthesia, insertion of necessary cannulas, manipulation of the kymograph and recorders. The first experiment, hydropericardium, is explained, and the students proceed with the work under close supervision. The chief operator makes the necessary notes, preserves the tracing, and studies it for subsequent presentation to the entire class. On the next day five other students conduct an experiment on aortic stenosis. Five more take up aortic regurgitation, five take up experimental myocardial degeneration, and five study air embolism. The quantitative study of fat embolism in the rabbit, with autopsy and frozen sections of the viscera, is participated in by only two students. Thus, twenty-seven students are engaged in this work, each of whom loses not more than three hours from the study of the pathologic morphology of this system, which is going on contemporaneously and with proper emphasis as to its importance.

At the time aortic stenosis is produced, students are called from the neighboring classroom in groups of eleven. With the multiple stethoscope they hear the normal heart sounds, and

then as the noosed ligature is tightened around the aorta, hear the murmur. In this manner, the first murmur a student is privileged to hear requires no stretch of the imagination as to its character, time, and audibility.

On the last day of the time allotted to the cardiovascular system, the students assemble in the amphitheater of the City Hospital for a three-hour period, with short intermissions at the end of each hour. In the first hour, six or eight preserved human hearts are handed each to two students. All the members of the class have previously learned the method of opening a heart by individual practice on calves' hearts, bought especially for the purpose. During the periods devoted to gross morbid anatomy they have had experience in describing organs and reaching conclusions as to the lesions present. At this exercise they demonstrate and diagnose the lesions present, under the constant criticism of their fellows. The next hour is occupied by the chief operators in charge of experiments, who demonstrate their tracings. Each tracing is scrutinized by the class, and the chief operator is then "cross-examined" by those on the benches. In the interval before the third hour, two or three patients are taken into the amphitheater. Professor R. G. Scott gives the history, explains the nature of the case, states the results of physical and other examinations, and demonstrates the murmurs by means of the multiple stethoscope. The students are then allowed to feel thrills, and listen to murmurs with their own stethoscopes. It must be emphasized that the third clinical hour is not an exercise in clinical medicine. It serves entirely the purposes of pathology considered from the functional and clinical viewpoint.

In the study of renal lesions, two students are assigned respectively to five experiments on rabbits. These are poisoned by cantharidin, by potassium chromate, by uranyl nitrate, by mercuric chlorid, and by sodium tartrate. The animals are in metabolism cages so that the urine may be studied quantitatively and qualitatively. Before the drug is administered, the urine is examined and a phenolsulphonephthalein test is done to obtain normal values. After the administration, the urine is studied daily and the phthalein output determined daily. At the termination of the experiment, a complete autopsy is performed, and the kidneys are studied histologically by means of frozen sections. During this period, four other students conduct a similar experiment on a larger animal which is given uranyl nitrate, the principal difference being that here the blood also is examined daily for its content of urea.

At the end of the period of study of kidney disease, an exercise is held at City Hospital similar to that with heart disease. The experiments are demonstrated and discussed by means of charts drawn up by the students and by the study of the microscopic sections.

In these two series of experiments, 41 or two-thirds of the class of 60 students actually participate in the work. This is further augmented in certain years by the experimental production of hydrothorax, acute bronchitis, and pneumonia. In other years the additional experiments may be with the alimentary canal, especially in the production of gastric ulcer, intussusception, and dysentery. At other times, glycosuria has been produced by the use of various drugs, piqûre, and pancreatectomy. In our own work we have not always enlarged the list of experiments, because our schedule is so arranged that in the course in pathology all the students are given experimental work in immunology. The arrangement is such that no student sacrifices more than three or four hours from his regular work in pathologic morphology for that in pathologic physiology.

As is seen, the work involves coöperation with only one other department, and in that instance with one teacher in the department of medicine. It may well be asked as to whether or not the physiologic and biochemical work may not be taken up in coöperation with those departments. If the department of pathology can be properly equipped, it is the best place. The staff can readily acquire the necessary technic for the relatively simple experiments. The physiologists undoubtedly could do this better, but it can be sufficiently well done without their aid. Being conducted by the pathologists in their own quarters, the relation of this phase to the features of pathology is more emphatic than if the student were to go to another department.

There is, however, another feature of importance. The university teacher receives his recompense for teaching in two forms—salary, and opportunity for research. Any enlargement of his teaching activities restricts the time available for research, and thus reduces his compensation. Hence a request for coöperation in a teaching enterprise, unless essential to the work of the school, is a request on the part of one department that members of another make a definite sacrifice. This is a feature too little considered in the various schemes proposed for interrelated coöperative instruction. Other questions are involved in this latter problem that need not be discussed here.

Practice

The relations of the pathology of function to

the practice of medicine are many. Much of the foundation of pathology as we know it today, was laid by great clinicians such as John Hunter, Matthew Baillie, and Laënnec. Even when men began to specialize in pathology, they continued to maintain a profound interest in the clinical features of their work. Bichat, Rokitansky, and Virchow, keen in observation, systematization, and deduction, continually emphasized the interpretation of their findings in terms of clinical phenomena. At the time this specialization began, and subsequently, clinical medicine became increasingly exact, and the school so established reached its culmination in such outstanding examples as Allbutt and Osler. Osler may well serve as the type and perhaps the culmination of this school. From the scientific standpoint, one characteristic of this great man was a capacity for accumulation of volumes of data upon clinical manifestations and correlated anatomic findings. Thus, it was determined that a certain lesion frequently gave rise to a given sign or symptom. The specialists in pathology, with only an occasional exception, such as Cohnheim, occupied themselves with much the same sort of study where their work approached clinical lines.

The notable difference between that type of clinician and pathologist and the workers in the same fields of today is the endeavor now under way to determine why the lesion is associated with the sign. And that is the spirit of the pathology of function, whether in the hands of the clinician or the pathologist. Knowledge of the reason for being often explains not only the connection between lesion and sign, but may serve also to explain and anticipate exceptions to the rule. An example may serve to illustrate the point. In our service a series of cases emphasized the well-known relation between accumulations of fluid in the pericardial sac and pulsus paradoxus. The inquiring mind, with its physiologic tendencies, soon asked "why?" No satisfying answer could be given. The result was a series of animal experiments which furnished the explanation. Such examples could be multiplied in numerous clinics throughout the world.

Today almost every hospital of high rank has a large part of its scientific spirit centered about the clinical-pathologic conference. Here are met the men from all spheres of the hospital's activity, upon a common ground and with a common purpose. The clinician and pathologist present their findings, arrived at from different points of view and with different methods of approach. The pathologist has the advantage because his examination yields the results of observations made directly, whereas in large part the clinician's observations are made indirectly. If this advantage in position on the part of the pathologist be reflected in a lack of appreciation of the clinician's difficulties, or if the clinician be impatient at failure to reveal information ardently desired in spite of the admittedly greater opportunity for observation furnished by the autopsy, the common ground is lost. Mutual tolerance is the only possible basis for the clinical-pathologic conference.

The purpose of the conference is manifold, but outstanding is the accumulation of data on disease and on the significance of clinical manifestations and clinical methods of examination. If no other object were in view, the conference is justified in that it exposes the limitations of existing methods of observation and therefore stimulates their improvement. Were methods perfect, diagnosis would likewise be perfect. Diagnosis is the keystone of modern medicine, and effort must be continuously directed toward its improvement.

The clinical-pathologic conference drags into mere routine if it be simply the setting side by side of clinical and pathologic findings. In the gulf between cause and effect is to be found the most interesting feature of the exercise. Without well-established observations on function, this gulf may be watered by the products of fruitless imagination. With such knowledge the rationale of disease is disclosed. With mutual sympathy and enthusiasm both pathologist and clinician furnish their evidence, and the discussion may be richly productive for both. Gaps so found furnish the stimulus for further investigation of disturbances of function and enlargement of that field of knowledge to which we are devoting our lives. In so far as the anatomist, physiologist, and biochemist are directed by their medical interests to take part, just so far is the value of the conference augmented.

Perhaps the most frequent contact between pathologist and clinician is that where the latter submits specimens of various kinds for examination by the former. The old way was to send the specimen to a laboratory, more or less remote, with or without a statement as to its source and the condition suspected, wait for a report, made with little information as to its purpose, file the report, and use it without knowing the manner of examination or the sources of error in the method.

The new way differs. It depends upon two essential factors. The clinician, by virtue of experience which the newer type of training in laboratory methods imposes upon him, has a background which enables him to appreciate the

difficulties, limitations, and sources of error inherent in all laboratory procedures. The pathologist, trained to understand the clinical importance of his results and the functional significance of his findings, is prepared for an interpretation in the light of the clinical features. The first factor, then, is mutual understanding.

The second factor is consultation, fostered by frequent visits of the clinician to the laboratory and of the pathologist to the bedside. In private practice this presents difficulties, but they are not insurmountable. In the hospital the difficulties are less. Here, however, a central physical position of the laboratory facilitates the necessary intercourse, and is fundamental to the prosecution of good work. Provision of suitable space for consultations in the laboratory is of advantage. Similarly, facility for collecting material on the ward by the pathologist, if he see fit, is helpful. The clinician should enter a clean, well ventilated, properly lighted laboratory so equipped that he need stand no chance of infecting himself or carrying infection to others. The pathologist should enter a ward or room, where he is received as any other consultant and given similar privileges.

As indicated, the consultation is of benefit through the intermediation of the pathology of function. Here the interests of clinician and pathologist meet, here is to be found the basis for the explanation of the phenomena studied, and here is the centrum from which benefit to the physicians and patient radiates.

The title assigned to me for this address has been taken advantage of in presenting for your consideration the changes which separate the old and the new pathology. The most important of these changes in the development of interest is the pathology of function. This newer aspect is not static; it is progressive. It has already permeated all divisions of the general subject. It is pathology applied to medicine. It is growing, expanding, and reaching farther and farther day by day. Knowing that nearly all of you are practitioners, it is my hope that the privilege of expressing myself, which you have so kindly offered, may yield an understanding of motives, methods, and ideals which will be productive of good in our mutual service to mankind.

A REPORT OF THE TESTS recently made by the U. S. Public Health Service to determine the amount of danger involved from running a gasoline engine in a closed space states that a small twenty-three horsepower engine discharges one and a half cubic feet of carbon monoxid in a minute, or enough to poison the air of a closed garage, ten by twenty feet in size, to the danger point in about three minutes.—*Medical Journal and Record.*

Studies of the Hypopharyngeal Lymphoid Tissues*

AN ANATOMIC STUDY OF THE SUPERFICIAL AND DEEP LYMPHOID TISSUES OF THE NOSE AND THROAT

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It is in the cervical region that the first lymphatic glands appear during embryonic life. In later life these cervical glands form a true collar at the junction of head and neck. From this collar a large vertical chain descends beneath the sternocleidomastoid muscle. This glandular collar is divided into the following six groups: suboccipital, mastoid, parotid, submaxillary, submental, and retropharyngeal.

Figure 1, taken from Sappey, shows the superficial lymphatic glands and vessels of the head and neck.

Suboccipital Group. These are usually two or three in number, but there is frequently only one,



Fig. 1. Lymphatic vessels of the tegument of the head and neck. From the *Atlas of Lymphatics*, by C. Sappey, Paris. E. Suboccipital glands. 17. Afferents to the suboccipital glands. 19-20. Efferents of suboccipital glands. D. Mastoid glands. 14-15. Afferents to the mastoid glands. 18. Efferents of the mastoid glands. C. Superficial parotid glands. 8-9-10-11-12-13. Afferents to the parotid glands. B. Submaxillary glands. 3-4-5-6-7. Afferents to the submaxillary group. A. Submental glands. 1-2. Afferents to the submental glands. F. Upper glands of substernomastoid group. G. Supraclavicular group of glands.

*Read before the Section on Eye, Ear, Nose and Throat Diseases of the Medical Society of the State of Pennsylvania, Philadelphia Session, October 14, 1926.

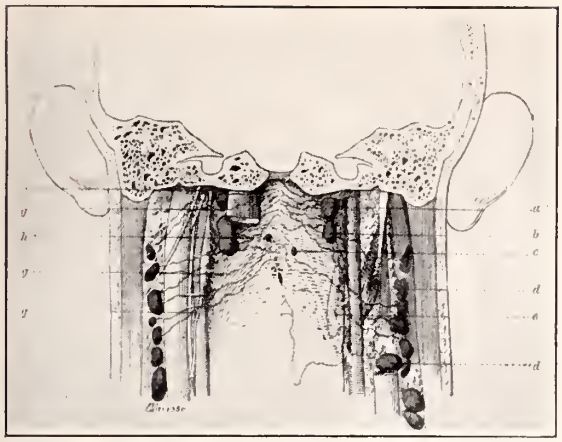


Fig. 2. Lymphatics of the pharynx. a, b. Retropharyngeal glands. c. Interrupting glandular nodule, placed in the course of the afferent vessels of these glands. d. Gland of the deep cervical chain. e. Efferent vessel of retropharyngeal glands, passing in front of the internal carotid artery. f. Afferent of the retropharyngeal glands, passing behind the right rectus capitis anticus major. g. Lymphatic of the pharynx, passing directly to a gland of the deep cervical chain. From an English edition of the *Lymphatics,* by Delamere, Poirier and Cunio. Published by W. T. Keener and Co., Chicago.

and sometimes they are entirely absent. They lie in the vicinity of the external occipital protuberance, close to the insertion of the complexus muscle. This group receives afferents from the occipital portion of the hairy scalp, and sends its efferents downward and forward to the upper glands of the substernomastoid group.

Mastoid Group. These are also usually two in number, but may vary from one to seven. They are easily palpated on the infant, but hard to demonstrate in the adult. This group lies upon the mastoid insertion of the sternomastoid muscle, just above the superior curved line of the occiput. It drains the temporal portion of the hairy scalp, the internal surface of the auricle, and the posterior surface of the external auditory meatus. It also sends its efferents to the upper glands of the sternomastoid group.

Parotid Group. This group really comprises two sets of glands—those contained within the capsule of the parotid gland, and those lying immediately beneath the gland (not showing in this plate), which are called the "subparotid." Of those glands within the parotid space there are from one to three lying external to the gland substance immediately anterior to the tragus. These are easily felt. The remainder of the parotid glands number from 10 to 16 which are of macroscopic size and numerous microscopic ones. They are in very intimate contact with the parotid tissue, from which they are differentiated with difficulty. In fact, the secreting parotid tissue can be shown in the embryo to be invading the lymphatic structure.

This group receives afferents from a large part of the skin of the frontal and temporal regions, the vessels from the scalp coursing both in front of and behind the ear in order to reach these glands. They also drain the external surface of the auricle, the external auditory meatus, the tympanum, eyelids, cheeks, and root of the nose. The efferent lymphatic vessels of this group drain into a group of glands situated at the spot where the external jugular vein leaves the parotid space, and so into the substernomastoid group.

The subparotid glands are placed between the parotid and pharynx in the laterophary ngeal space, where they are in contact with the carotid and internal jugular vessels. They are the starting point for laterophary ngeal abscesses. This subparotid group receives afferents from the nasal fossæ, the nasal pharynx, and eustachian tube. Their efferents go to the glands of the deep cervical chain.

Submaxillary Group. This group varies in number from three to ten. They stretch in single file along the inferior border of the mandible from the origin of the anterior belly of the digastric muscle to the angle of the jaw, resting upon the edge of the submaxillary salivary gland. Contrary to the condition in the parotid, however, there is no mingling, within the submaxillary gland, of the salivary and lymphatic tissue. This lymphatic group receives afferents from the nose, midline of forehead, cheek, upper lip, anterior part of lower lip, almost all of the gums, and the anterior third of the lateral border of the tongue. Note particularly that none of its lymphatics come from the region of the fauces. The efferent vessels empty into the glands of the

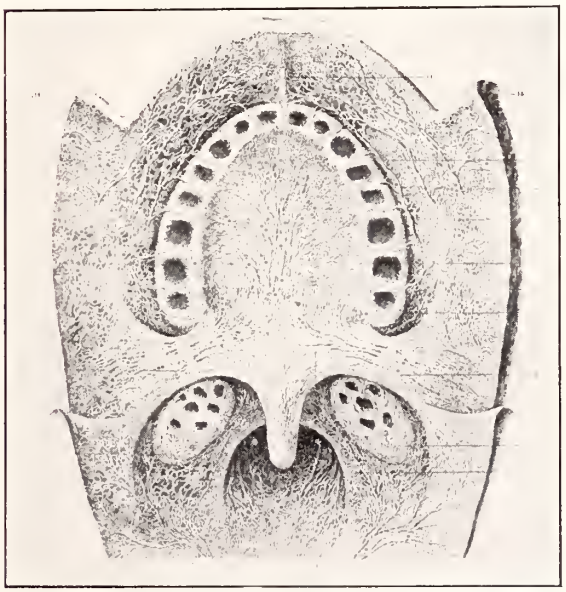


Fig. 3. Lymphatic vessels of the posterior wall of the pharynx and of the tonsils, of the velum of the palate and the palatine arch, of the gums and mucous surface of the lips. From the *Atlas of Lymphatics,* by C. Sappey, Paris.
9. Small trunks passing from inner surface of alveolar process outward to collecting trunk. 10. Collecting trunks into which the former empty.

deep cervical chain, especially those near the bifurcation of the common carotid.

Submental Group. This group varies from one to four in number, two being commonly found. They lie in the triangle beneath the chin bounded by the anterior bellies of the two digastric muscles and the hyoid bone. They receive afferents from the skin of the chin, central lower lip, part of the mucous membrane covering the mandible, the floor of the mouth, and tip of the tongue. The efferents of this group follow a double course. Three or four trunks run to the submaxillary group; while one or two others course downward across the hyoid bone and terminate in a gland placed on the anterior surface of the internal jugular vein.

Retropharyngeal Group (See figure 2). This group lies behind the pharynx at the junction of its posterior and lateral surfaces, at the apex of the lateral masses of the atlas bone. They number one or two on each side, and if two, one lies directly above the other. The relation of these glands is as follows: Anteriorly—posterior wall of pharynx. Posteriorly—rectus capitis anticus major muscle, which separates them from the atlas. Externally—constrictors of the pharynx and the internal carotid artery. Internally—they lie nearly 2 cm. from the midline, and so are purely lateral. There are no real glands in the midline, but there may be slight enlargements of the lymphatic vessels where they pierce the pharyngeal wall at this point.

The retropharyngeal glands receive afferents from almost all of the mucous membrane of the nasal fossæ and their connecting cavities, the nasopharynx, eustachian tube, and possibly from part of the cavity of the tympanum. The efferent vessels empty into the superior glands of the internal jugular chain, passing both in front of and behind the carotid and jugular vessels.

It should be noted here that this retropharyngeal group lies high in relation to the structures of the pharynx, and that it drains only the epipharynx and the upper part of the mesopharynx. Only the superior pole of the tonsil has lymphatic drainage to it. It is possible that some "retropharyngeal abscesses" of certain writers have been abscesses starting in the upper glands of the internal jugular group rather than in this retropharyngeal group itself.

Running vertically from the glandular collar described above is a large chain of lymph glands called the "deep cervical chain." This deep cervical chain (called also the carotid chain) is flanked by several smaller chains. It comprises 15 to 30 glands, the number varying inversely with their size. These glands may hypertrophy with disease, but they never increase in number. This chain of glands is closely adherent to the undersurface of the sternomastoid muscle, and is divided into two parts—the substernomastoid group which lies above, and the supraclavicular group below.

Substernomastoid Group. This group extends beneath the muscle of that name from the tip of the mastoid process to the junction of the internal jugular and subclavian veins. It is in the upper part of this area that the glands are most numerous. This substernomastoid group is further divided into two subgroups: (a) The external glands which lie behind and external to the internal jugular veins, and are continuous with the supraclavicular glands; (b) the internal glands, commonly called the "internal jugular chain," which rests on the internal jugular vein. These two groups are connected by many anastomoses. The external glands of the substernomastoid group receive afferents from the mastoid and suboccipital groups of glands, the occipital portion of the hairy scalp direct, the external ear, and the upper part of the neck. Its efferents drain into the supraclavicular group below.

The Internal Jugular Group. This division of the substernomastoid chain receives afferents from the following groups of glands which have been described before: retropharyngeal, parotid, subparotid, submaxillary, submental, and from the secondary trunks which parallel the deep cervical chain. It also receives trunks which come directly from the following regions: the greater part of the tongue, part of the nasopharynx, all of the middle and inferior portions of the larynx, the cervical portion of the esophagus, the nasal fossæ, the cervical portion of the trachea, and the thyroid gland. The efferent vessels of the internal jugular chain unite to form one or two large vessels which in turn unite with the efferents of the supraclavicular glands to form the jugular trunk. On the right this jugular trunk enters the venous system at the junction of the internal jugular and subclavian veins, and on the left it ends in the terminal bend of the thoracic duct.

The Supraclavicular Group. This group occupies the supraclavicular triangle, resting on the muscles of the side of the neck. The glands of this group vary greatly in size and number, but they are usually quite numerous. They receive afferents from the back of the scalp and neck, axilla, arm, and pectoral region. Their efferents unite with those of the substernomastoid group to form the jugular trunk.

Considering the lymphatic system in regard to the arrangement of its vessels within the oral cavity, we find the following:

The Gums (See figure 3). The gums are drained by a series of short parallel vessels which originate on the inner margin of the dental process, run out between the teeth, and there unite to form a large marginal collecting trunk which empties only into the submaxillary group.

The Tongue (See figure 4). In this organ the lymphatic drainage is divided into three portions, corresponding roughly to the anterior, middle, and posterior thirds. The tip of the tongue has collectors which empty into the submental group of glands, and other collectors which end in the lowest glands of the internal jugular group of the substernomastoid chain.

The middle third of the tongue is drained by lymphatics which course both along its margins and in its midline. The most anterior of the marginal trunks drain into the anterior glands of the submaxillary group, but the majority of the marginal collectors and all of the median ones empty into the lower glands of the internal jugular group. The posterior third drains into the uppermost glands of the internal jugular group by both median and lateral collecting trunks.

The Palate. The lymphatics of the vault of the hard palate all drain into the upper glands of the substernomastoid group. The mucous membrane of the soft palate is covered by an extremely fine-meshed network of lymphatics which is continuous with adjacent areas. This network reaches its most complete development over the uvula. The collecting vessels of the superior surface of the soft palate divide into two trunks. One of these is ascending and terminates in the retropharyngeal group, while the other is descending and joins the internal jugular group. The trunks of the inferior surface of the soft palate unite with the descending ones from the superior surface, and drain into the internal jugular glands. The lymphatic vessels from both pillars of the soft palate also drain into the glands of the internal jugular group.

The Pharynx. The lymphatic apparatus of the pharynx is best shown by referring to another plate from Sappey (see figure 5). In this plate we are looking at the pharynx as it appears from behind after being split open along the posterior midline. In it we see the posterior two-thirds of the tongue, the uvula split open, the faucial tonsils, the region of the lingual tonsil and of the lateral lymphoid mass between it and the faucial tonsil, the anterior and posterior pillars, the epiglottis, the great horn of the hyoid bone, the great horn of the thyroid cartilage, the thyrohyoid ligament, the entire pharyngeal wall, and the upper end of the esophagus.

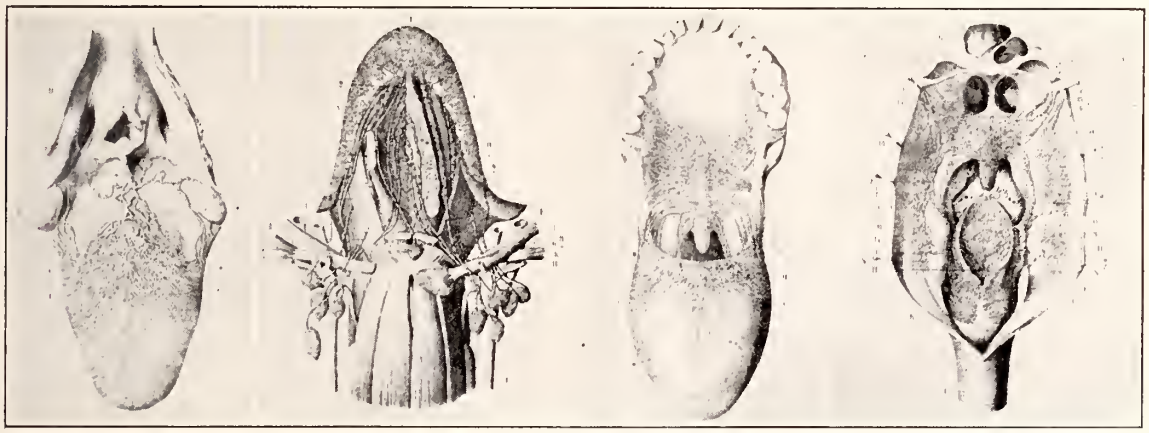


Fig. 4. Lymphatic vessels of the tongue, arch of the palate, larynx, and pharynx. From the *Atlas of Lymphatics,* by C. Sappey, Paris.
A. 5-7. Lateral collecting trunks of base of dorsal surface of tongue. 6. Median collecting trunks of same. B. 2-4. Median collecting trunks of inferior surface of tongue. 5-6-7-8. Lateral collecting trunks of same. C. Lymphatic vessels of inferior surface of soft palate showing median and lateral collecting trunks. D. Lymphatic vessels of superior surface of soft palate, etc. 3-4-5. Collecting vessels which go to the retropharyngeal glands. 6. Collecting vessels which go to the internal jugular group.

Here we have the median and lateral collecting trunks from the posterior third of the tongue. Converging, they pass downward, run under the lateral folds of the epiglottis and under the lateral thyrohyoid ligaments to enter the upper glands of the internal jugular group. External to these are collecting trunks from the anterior pillars which unite with those from the posterior pillars and end in the same glands as those from the base of the tongue.

The network of lymphatic vessels over the surface of the epiglottis and the laryngeal portion of the mucosa of the pharynx is especially rich. This network leads to larger vessels on the posterior surface. Some of these ascend to enter the same glands just above the thyroid, while others course downward to enter lower

glands of the internal jugular group lying on each side of the esophagus which are not shown here.

It is important to notice that while the network of vessels is very plentiful over the tongue, faucial tonsils, pillars, and epiglottis, there is an area on the anterior wall lying between the faucial tonsils and the midline which is peculiarly bare of the smaller lymphatic capillaries. Only the larger collecting trunks traverse this space, but they are the vessels which drain a large part of the tongue, the soft palate, and anterior pillar.

The collecting trunks of the pharynx can be grouped into three classes—superior, middle, and inferior. Only the beginnings of some of the superior trunks can be seen at each side where the uvula has been split. Most of their drainage area and course is not shown on this plate. They receive drainage from the vault of the pharynx, from the lateral walls of the nasopharynx, and from the upper half of the posterior wall, including just the tip of the upper pole of the faucial tonsils. These collectors run up or down until they reach the level of the lateral masses of the atlas bone. Near the midline they pierce the pharyngeal musculature, then turn outward and run to the retropharyngeal glands, where they terminate. As we have already seen, this group of glands is purely lateral, lying at least 2 cm. from the midline. The collecting trunks emptying into this retropharyngeal group often have small interrupting glandular nodules near the median raphé, but the true regional glands are always lateral. Some of these vessels may avoid the retropharyngeal group and pass directly to the superior and middle glands of the internal jugular chain. The collecting trunks of the middle and inferior portions of the pharynx (which includes the region from the upper pole of the faucial tonsils to the esophagus) all run downward or upward to enter only glands belonging to the internal jugular group of the substernomastoid chain.

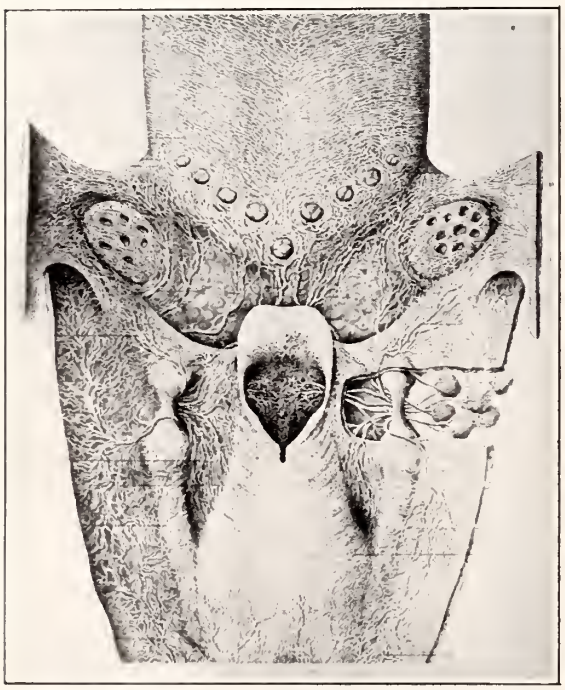


Fig. 5. Lymphatic vessels of the base of the tongue, tonsils, larynx, and pharynx. From the *Atlas of Lymphatics*, by C. Sappey. Paris.

4-5-6. Median collecting trunks from base of tongue draining into internal jugular group. 13. Upper glands of internal jugular group. 7. Lateral collecting trunks from base of tongue emptying into same glands. 8. Trunks from anterior pillars of soft palate draining into same glands. 15. Trunks from posterior pillars ending in same glands. 16. Trunks from posterior surface of pharynx having the same termination. 17. Trunks from anterior and lateral surfaces of pharynx which have the same termination. 18-19. Trunks from lower portion of pharynx which pass downward to lower glands of internal jugular group. 10. Beginnings of collectors of upper part of pharynx, some of which go to retropharyngeal glands. 20. Great horn of hyoid bone. 21. Great horn of thyroid cartilage.

Nasal Fossæ. The mucous membrane of all portions of the nasal fossæ is covered with a thick network of lymphatics which are continuous with those of the pharynx and the upper surface of the soft palate already described. The anterior third of the nasal fossæ is drained by small trunks which empty directly into the submaxillary group. The posterior two-thirds of these fossæ is drained by much larger trunks. They arise from the junction of the nasal fossæ and pharynx near the orifice of the eustachian tube, where they are joined by lymphatics from the middle ear.

Some of these collectors run downward along the posterior pillars and so to the same glands of the internal jugular group that receive the lymphatics of the meso- and hypopharynx. Another group of collectors which are larger than the former, course directly posteriorly where they pierce the pharyngeal wall on each side of the midline and terminate in the retropharyngeal group of glands. As a dye injected at any point of the nasal mucosa will find its way to these retropharyngeal glands, they evidently receive drainage from all parts of the nasal mucosa, though part of it is drained by the internal jugular group as well.

In closing, it should be noted that the entire pharynx, from the roof of the nasopharynx to the esophagus, drains into only two gland groups. These are the retropharyngeal group and the internal jugular group which belongs to the substernomastoid chain. The internal jugular group receives from the entire area, but the retropharyngeal drains only the region from the roof of the nasal fossæ to the superior pole of the faucial tonsils. Of course, the retropharyngeal glands are themselves merely way stations, as they in turn drain into the internal jugular chain.

A STUDY OF THE SUPERFICIAL AND DEEP LYMPHOID TISSUES OF THE HYPOPHARYNX

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In the presentation of this study of the lymphatic tissue of the hypopharynx it is not my hope to present anything new for your consideration, but rather to enlist your interest in the solution of some problems concerning pathologic conditions found in the tissue below the tonsil, across the base of the tongue, and the retropharyngeal glands.

Hypertrophy of the lateral mass of lymphoid tissue of the hypopharynx (that is, between the faucial tonsils and lingual tonsil) occurs frequently after tonsillectomy, and sometimes fills the lower part of the tonsillar fossæ. This mass is often mistaken for a part of the inferior pole of the tonsil that has not been removed. It seems that some operators attempt to remove all this tissue with the tonsils to escape being credited with an incomplete operation. Others claim that if it is not removed, the maximum benefit from the tonsillectomy cannot be obtained.

The function of the lymphoid tissue in the nasopharynx is not understood. It is interesting to note, however, that the epipharyngeal lymphoid tissue hypertrophies in early life, that in the mesopharynx in childhood or before mature development, but the hypopharyngeal tissue, particularly the lingual tonsil, hypertrophies in adult life from thirty-five to sixty years of age. When hypertrophy of the lingual tonsil occurs, the lateral mass is frequently enlarged, but the reverse is not always true.

The formation of lymph is not more definitely understood than the functions of the lymph nodes and lymphoid tissue masses. Both the simple filtration theory, as suggested by Ludwig, and the excretory theory, advanced by Heidenhain, have been objected to by many investigators. Metchnikoff found that particles of mucus from the surface of the tonsils of healthy individuals contained numerous phagocytes filled with germs of all sorts. Stohr believes that these phagocytes are lymphocytes originating in the germinal follicles, and that they are carried by the lymph stream to the surface of the mucosa of the pharynx where they escape through the epithelium. Further, he believes that this outflow in itself is protective.

The lymph vessels, at one time, were thought to originate in the interstitial spaces. MacCallum, however, believes that the lymph system is a closed system and that the lymph passes through the walls of the lymphatic vessels. The formation of lymph, as well as its absorption, is probably a specific function of the cells.

The excretory theory of Heidenhain and the protective function assigned to the lymphoid tissue of the nasopharynx by Stohr are somewhat strengthened by MacCallum's conception of the lymph system as it has been shown in the anatomic study just presented—that the mucosa covering the faucial tonsils and the lymphoid tissue between the faucial tonsil and the lingual tonsil contain a network of fine lymphatic capillaries. Histologic study of hypertrophied lymphoid tissue shows a marked hyperplasia of the germinal follicles. That follicles are present in the lymphoid tissue of the hypopharynx, particularly the lingual tonsil, is proved by histologic study, and further by certain pathologic conditions—keratosis and follicular infection with cryptic distention as occurs in the faucial tonsil. In the former condition, the horny masses are found on the lateral wall of the pharynx and also on the lingual tonsil. If hypertrophy is, therefore, a manifestation of increased activity, it is physiologic, and as such, should not be attacked surgically unless obstructive or otherwise pathologic.

Following the hypertrophic period, retrograde changes begin. The tissue's resistance to infection is reduced, and it is during this period that most foci of infection develop.

The lymphoid tissue on the lateral wall of the pharynx behaves as the faucial and pharyngeal tonsils; that is, hypertrophy disappears, leaving a more or less fibrous mass or infected follicles that may cause systemic infection or only local discomfort. If the history and a careful examination, both local and general, convinces the surgeon, previous to or following a tonsillectomy, that the lymphatic tissue below the tonsil is causing either local or general disturbance, it should be removed. Removal of this tissue as a routine measure is objectionable, as many patients are made uncomfortable by the resultant cicatricial contractions or by dryness of the throat.

The diseases of the lingual tonsil are the same as found in the faucial tonsil, but not so frequent. I wish to present only one phase of the pathologic conditions found in the lingual tonsil, that is, hypertrophy. Hypertrophy of the lingual tonsil is probably a local manifestation of a general condition. As noted in the anatomic study previously presented, the mucosa of the lingual tonsil is devoid of the fine network of lymph vessels found in the mucosa of the lateral lymph tissue and the faucial tonsils. The lingual tonsil, histologically, is similar to the lymph tis-

sue found elsewhere in the hypopharynx. It has no definite capsule separating it from the muscular tissue of the tongue. The predisposing causes are an unstable nervous system, infection of the alimentary canal, and endocrine imbalance, particularly of ovarian origin. Maybaum recognizes a congestive type which occurs in patients with hyperacidity or disturbed circulation as a result of cardiorenal disease, and a noncongestive type. J. Arnold Jones regards ovarian pathology and an unstable nervous system as the most frequent factors causing lingual-tonsil hypertrophy.

From sixty to seventy-five per cent of all cases of hypertrophy of the lingual tonsil occur in females, and very infrequently under thirty years of age. I have seen one case, a girl of seventeen, whose tonsils and adenoids had been removed when ten years old. The onset of the lingual-tonsil hypertrophy, based on the symptoms of irritation, began three months before examination. On the other hand, I have under observation at the present time a female patient, aged seventy-six, with quite marked hypertrophy.

That the etiology of hypertrophy is not due to infection is suggested by the following observations: (1) That no pathologic condition is manifest in nose or throat. (2) That many patients have had all their teeth removed and are wearing plates. (3) That in several instances acute infection of the faucial tonsils occurred after the onset of symptoms referable to the lingual tonsil, and the lingual-tonsil hypertrophy did not increase. (4) That where the faucial tonsils were definitely diseased and removed, no benefit resulted so far as the lingual-tonsil hypertrophy was concerned.

Symptomatology. A lump in the throat that the patient cannot swallow or cough up is the most frequent symptom, clearing of the throat, frequent swallowing, or a feeling of tightness. Difficulty in swallowing is never complained of, but occasionally tickling will cause gagging. With one patient this was so pronounced that vomiting occurred after meals at times. J. Arnold Jones included dysphagia among the symptoms, varying from only slight disturbance to inability to take food. He states that this is rather an uncommon symptom. In my experience I have never encountered one case with difficulty in swallowing. The symptoms often are out of all proportion to the local condition. In the congestive type, bleeding from the dilated veins sometimes occurs. Unless, on examination, the bleeding point is definitely seen, this symptom should be regarded with suspicion.

Examination usually reveals a bilateral enlargement, sometimes a smooth surface, other times a nodular condition on both sides of the median line of the tongue. When the epiglottis is scroll-like, that is, with the tip turned backward, exposing the posterior surface of the epiglottis to irritation from the hypertrophied mass, the irritative symptoms, coughing and clearing the throat, are more marked than in the case with a straight epiglottis where the anterior surface is touched by the hypertrophied mass.

Treatment. A careful general examination of every case is necessary. While the neurotic temperament is evident enough, it is never wise to be content without a search for the underlying cause. Blood chemistry and cytology often reveal conditions contributory to the patient's general ill health. A tactful explanation of the cause of the patient's distress must be undertaken to allay the fear so many have of a tumor or inward goiter. Bromides are useful in many cases. Hypnotics should be employed if the patient does not secure sufficient rest. Astringent gargles, used with tongue protruded and head back, are beneficial. The local application of a one-per-cent to two-per-cent solution of nitrate of silver, or iodin crystals in albolene, gives some relief, A lozenge containing anesthesin relieves the irritation.

All local treatment should be discontinued gradually as soon as improvement begins, to avoid delaying recovery by focusing the patient's attention on the condition present.

If the local and general treatment, as described, fails to give relief, the use of the galvanocautery making puncture wounds on the most prominent parts of the hypertrophy, or the removal of pieces with the Myles lingual tonsillotome will give the required temporary relief.

In my experience it has seldom been necessary to resort to surgical interference. In the cases that have been operated upon, recurrence has been noted just as in the unoperated cases. Very few have uninterrupted annoyance. Remission of symptoms is the rule regardless of the method of treatment. Surgical treatment of the lingual tonsil, as elsewhere, should not be the first to be tried, nor the last. The method of treatment is not on trial, but the judgment of the surgeon.

Retropharyngeal Abscess

Retropharyngeal abscesses are preceded by an adenitis and periadenitis of the retropharyngeal glands. These glands are situated about on a level with the posterior part of the soft palate at the junction of the posterior and lateral walls of the pharynx. They are usually two in number, placed one above the other. In the median line of the pharynx are found interrupting glandular nodules on the course of the afferent

vessels of these laterally placed glands. With a breaking down of the glands, pus burrows downward behind the retropharyngeal mucosa. Clinically, the symptoms are the result of obstruction in the hypopharynx. Sometimes the abscess extends into the mediastinum, in other cases there is a lateral extension, the abscess pointing either anterior or posterior to the sternocleidomastoid muscle. In infants, in my experience, this has never occurred. I have seen it in one child, aged four and one-half years, with the abscess pointing anterior to the sternocleidomastoid muscle, and in another child ten years of age, posterior to the sternocleidomastoid muscle.

The granular nodules are not the origin of retropharyngeal abscesses. The median nodules disappear early in life, but the lateral group are constant even in adults.

A nasopharyngitis is the antecedent of most retropharyngeal abscesses. Sometimes this infection is so mild as to escape the attention of the parents. At other times it is quite severe, and accompanied by an acute otitis media and cervical adenitis. The cervical glands involved are located just external to the common carotid. In many cases the cervical adenitis is noted by the parents as preceding the respiratory and deglutitory symptoms resulting from the retropharyngeal abscess. I have never seen an adenitis of the retropharyngeal glands, so am unable to say whether the cervical adenitis precedes or follows the infection of these glands. I see no reason, however, why the cervical adenitis could not be primary, but rather suspect it is secondary. The infection of the nasopharynx responsible for the retropharyngeal abscess could cause a bilateral cervical adenitis; but in the cases I have observed, the cervical adenitis is either unilateral or more pronounced on the same side as the retropharyngeal abscess.

Tuberculosis should be considered as an etiologic factor, either as a tuberculous adenitis or secondary to a tuberculous process in the cervical vertebræ. Acute exanthemata, particularly scarlet fever, may have preceded the retropharyngeal adenitis. This happened in one case under my observation. Another case followed an erysipelas of the face and scalp.

In adults, syphilis may be the cause. Syphilitic retropharyngeal abscesses extend upward into the epipharynx, producing a thickening of the walls. They are chronic, the patients giving a history of being conscious of a swelling in the throat for several months. They cause very little or no pain, and no elevation of temperature.

Symptomatology and Diagnosis. Ninety-six per cent of all cases of retropharyngeal abscesses occur in children before the sixth year, and seventy per cent before the second year. As the condition is essentially one of infancy, there are few subjective symptoms. The onset is obscure. For history we are dependent upon parents who are frequently poor observers. Difficulty in respiration and swallowing are the causes for the anxiety of the parents, and very seldom does the physician see these patients before the onset of obstructive symptoms.

Examination by direct inspection may show a swelling on one side of the throat, but much more definite information can be obtained by palpation. A mass is felt on one side of the throat, extending down toward the epiglottis. Very seldom does it extend higher than the middle of the mesopharynx. The swelling is always unilateral; at least, I have never seen a bilateral case nor have I been able to obtain from the literature a history of a bilateral retropharyngeal abscess.

In adults, one should consider the possibility of aneurysm of the common carotid, or a pharyngeal abscess as the result of caries of the vertebræ. Aneurysms can be excluded by the absence of pulsation, and the x-ray will exclude the probability of caries of the vertebræ.

Treatment. Every case of retropharyngeal abscess is an emergency, and should be admitted to the hospital at once for drainage. Drainage through the mouth is the safest in all cases without lateral extension. The patient should be wrapped in a sheet, and placed on his back on a table. No anesthetic is used. Good illumination is essential. A mouth gag should be used, and the tongue depressed sufficiently to obtain a good view of the abscess wall. Using a pair of scissors or a knife guarded by adhesive, a vertical incision should be made through the abscess wall of sufficient length to obtain thorough drainage. The patient should immediately be turned on his side with the head lowered, and a suction tip used to remove the pus as it drains from the abscess cavity. If the surgeon is satisfied that he has made a sufficient opening in the wall of the abscess for drainage, no further inspection should be made. The child should be kept in the hospital under observation for two or three days. If there is no difficulty in breathing or swallowing, there is no necessity for postoperative treatment.

If there is a lateral extension with definite fluctuation, either anterior or posterior to the sternocleidomastoid muscle, external drainage should be done. I. Moore and Norman Patterson, of London, recommend the excision of retropharyngeal glands through incision along the posterior border of the sternocleidomastoid

muscle, particularly in tuberculosis cases. Lateral extension of acute retropharyngeal abscesses is very rarely encountered except in neglected cases, which are usually fatal regardless of the method of drainage. In certain recurring types that are almost always tuberculous, excision of the retropharyngeal gland, as advocated by Patterson and Moore, may result in quite serious complications, such as paralysis of the cervical sympathetic with pseudoptosis due to paralysis of the unstriped muscle of Mueller, enophthalmus, contraction of pupils, and paresis of the upper portion of the trapezius muscle. On account of the dangers encountered by such extensive dissection as is required by the removal of the gland or the approach to the retropharyngeal abscess by the external route, only in very rare instances should any other method of drainage be attempted than through the mouth.

Complications. Retropharyngeal abscesses have a relatively high mortality. In a series of eighteen cases coming under my observation, four deaths have occurred, one as a result of septicemia in a neglected case, one on the operating table while attempting an external drainage in a very extensive lateral extension, and another from a severe hemorrhage resulting from an erosion of the internal carotid artery. In the last case the abscess ruptured spontaneously while the patient was on his way to the hospital. Examination on his arrival showed an opening into the cavity, and as it seemed to be thoroughly empty nothing was done. The child seemed so well that he was allowed to return home the same day. The next day, early in the morning, the mother stated that the child had had a hemorrhage. I saw him shortly afterward, but could see no evidence of the hemorrhage in the throat. Six hours later the mother again reported a hemorrhage. Examination at this time showed some distention of the abscess cavity and a small clot protruding from the opening where the spontaneous rupture had occurred. The child was sent to the hospital. A profuse hemorrhage occurred in the emergency operating room and the patient died in a few minutes. An erosion of the internal carotid artery had occurred.

Every case of recurrent hemorrhage after drainage of a retropharyngeal abscess, particularly when spontaneous rupture has occurred, demands careful observation. Ligation of the internal carotid on the side of the abscess offers the only means of saving the patient's life if erosion has taken place.

Three patients collapsed after the drainage of the abscess. In one case, drainage was done about three o'clock in the morning. At eight o'clock the child was in good condition, but to satisfy myself that the cavity was thoroughly drained I took the patient to the operating room, where, under good illumination, a satisfactory inspection could be made. Nothing was done except depressing the tongue and looking into the throat. Immediately the child collapsed, the pupils dilated, respiration was suspended, and profuse perspiration appeared. For two days the child was kept alive by keeping it on its left side and using artificial respiration at intervals. Recovery followed. Another patient, two hours after drainage, had the same symptoms as enumerated above, but they lasted only a short time. In a third case, drainage was done in the afternoon, and the symptoms of collapse came on about five hours later and lasted for about six hours. Artificial respiration was resorted to, and the child recovered. The fourth patient collapsed immediately after drainage, and all attempts made to save his life were futile.

The cause of this condition is doubtful. I believe it has something to do with the sudden release of pressure on the vagus. It is on account of the frequency of this alarming complication that I feel any attempt at drainage of a retropharyngeal abscess should be done with as little trauma as possible. Be satisfied when the abscess cavity is opened, and let it alone, but keep these patients in the hospital under observation.

ABSTRACT OF DISCUSSION

On Papers of Drs. Crumrine and McMurray

GEORGE L. TOBEY, JR., M.D. (Boston, Mass.): I should like to ask the Doctors' experience with the x-ray in these lymphatic tissues.

DAVID I. GIARTH, M.D. (Ford City, Pa.): In the case of a dressmaker who had been in the habit of chewing the end of threads the result was an inflammation, and she was constantly clearing her throat. I found an enlargement of the lingual glands, and the treatment used was diathermy coagulation.

In a number of cases diathermy coagulation has proved to be the ideal treatment. It is valuable in irritation from tobacco or alcohol, or in the case of clergymen who have lost the voice.

GEORGE F. GRACEY, M.D. (Harrisburg, Pa.): A great many tonsil operations are followed by hypertrophy of the uvula which causes distressing symptoms. This has been ascribed to three causes—infection, interference with the venous return, and interference with the lymphatic return. I do not believe it is either of the first two, but probably is due to interference with the lymphatic return. Will the essayists enlighten us on this subject?

HENRY S. WIEDER, M.D. (Philadelphia, Pa.): I rise in defense of the removal of the lymphoid tissue at the side of the tongue. Dr. Zacks and I had been doing this consistently in every case since Dr. Richardson visited Philadelphia, but had been doing it in a large number of cases before hearing his paper. In any cases where we did not go to this trouble, we have

regretted it afterwards. Often, at the time of operation, it is difficult to see this small piece of lymphoid tissue, but quite frequently, if you leave it, you will have a focus of infection and have to do a secondary operation. We have found that in removing this piece of tissue routinely we have a somewhat stormier convalescence. Nevertheless, despite this fact, we believe the end result justifies the delay, and we have the satisfaction of knowing that we have done a complete operation.

DR. CRUMRINE (in closing): When its lymphatics are injected with mercury, the uvula will swell to three or four times its normal size. The lymphatics drain from above the tonsils and uvula, and both of them drain largely into the internal jugular and retropharyngeal glands. The vessels leading from the tonsil run along the uvula and then to the glands, and it seems very plausible that the mutilation of these vessels by tonsillectomy could readily cause edema of the uvula. By occluding the lymphatic capillaries it would cause a congestion temporarily in the region from which drainage passes to and from the tonsil area.

DR. MCMURRAY (in closing): In some cases it is necessary to remove the lymphoid tissue spoken of by Dr. Weider, but I do not believe it ought to be done as a routine measure any more than any other hypertrophied tissue on the lingual wall ought to be routinely removed. These cases should be studied carefully, for one is almost sure to get into trouble in removing this piece of tissue when it is bleeding. This, however, should not deter the surgeon when it is necessary. Perhaps the x-ray or diathermy or some other treatment would do just as well, and probably preserve for the patient tissue that might be of some service. There is much we do not know about lymphoid tissue, either in the nasopharynx or elsewhere.

A SUMMARY OF THE MIDWIFE SITUATION IN PENNSYLVANIA*†

MARY RIGGS NOBLE, M.D.
HARRISBURG, PA.

Since our foreign population in rural Pennsylvania is found chiefly in the coal regions, the midwife is an acute problem only in those areas where racial custom chiefly determines her activity.

No one knows exactly how many licensed women there are at the present time—probably something less than 1,200 in the entire State. The Department of Health has undertaken to control these women in eight counties by close supervision and instruction—this by permission of the Board of Medical Education and Licensure.

What I have to say is not to be construed as a defense of this excrescence on our civilization, nor are we trying to prolong the survival of a group all too faulty in the care they give in childbirth. We must remember that many foreign women *wish* to be attended in confinement by a *woman;* that the midwife does not cost as much usually as the doctor, and is besides often a "handy helper"; that (even in this well-populated State) isolated settlements exist beyond the easy reach of doctors, where a midwife can easily live and "work up" a "practice."

Our work with them began in 1922 in four counties, Lackawanna, Luzerne, Schuylkill, and Cambria. In 1925 we added Lehigh, Carbon, Westmoreland, and Somerset. These have a combined population of 1,735,580. Two full-time women physicians, aided by State nurses, are doing the work.

We first undertook to make a complete census of all licensed women, and to discover and put out of business all the unlicensed ones. Routine visiting is done on all cases delivered by midwives as soon as possible after the birth. Monthly classes are conducted, with a systematic elementary course in midwifery. These are held for nine months of the year, and attendance is compulsory.

There were many difficulties at first—misunderstanding as to our purpose, and resentment because, whatever our protestations, we were doubtless going to infringe on their liberty and take away their practice. We have overcome practically all their antagonism. It seems not too much to say that we have the situation in seven of the counties in hand, and the eighth and last county, just recently surveyed, is progressing to good order.

Our Pennsylvania laws provide that midwives shall deliver only uncomplicated vertex cases. For any deviation whatever and any complications, they must call a physician. Every complication is reported to the nurse, recorded by her, and entered on a monthly report sent to our office. To give them orderly knowledge so that they may quickly recognize when to summon the doctor and to inspire obedience to the law are two ends sought in our teaching.

The classes for instruction follow an outline prepared by ourselves. We sought to nail their interest and make them *eager* to attend regularly, by making the lessons dramatic and giving realistic demonstrations. For this, life-sized manikins with chamois babies were imported, supplemented by fetal skulls, bony pelves, and a few colored charts and pictures.

We have now a record of 21,763 deliveries, with gratifyingly low mortality rates both of mothers and babies. In reckoning the deaths we have included every one where a midwife had anything to do with the case, even though a doctor may have been called and signed the death certificate. Thus do we avoid the criti-

*Read before the Section on Pediatrics of the Medical Society of the State of Pennsylvania, Philadelphia Session, October 14, 1926.

†From the Bureau of Child Health, Pennsylvania Department of Health.

cism that we fail to make the midwife duly responsible.

In the 21,763 deliveries there have occurred to date, August 31, 1926, 40 maternal deaths, and 611 infant deaths in the first month of life. This gives us a maternal death rate of 2. The State rate for 1925 is 5.9. The neonatal death rate is 28 (Dr. Tewksbury tells me that the neonatal death rate for 1925 will be approximately 40).

In considering their low maternal and infant mortality it is well to remember the following facts: (1) The midwife is practicing in the strictly limited field of normal vertex cases, while the doctor has both the normal and abnormal. (2) The midwife may not use any drug or appliance for hastening the climax, nor may she apply forceps, nor operate. She is obliged to wait patiently for nature to accomplish the delivery unaided. (3) The midwife is dealing with women of races who die less easily in childbirth than the American stock.

In several counties, of their own accord, the midwives have organized themselves into leagues and this is of great value in fostering pride in their profession and awakening a real *esprit de corps*.

Finally, it may be said that the present indications are that unless our immigration laws change and a large influx of foreigners occurs, the midwives will gradually disappear. The majority of them now are elderly women who will soon die off. Few new licenses are being granted. Young women are not taking the places of the old ones. The new generation of foreigners are unlikely to want to be under the care of a midwife. Thus automatically "elimination" of the entire group may not be far distant.

THE 100-PER-CENT-EFFICIENT COUNTY MEDICAL SOCIETY SECRETARY

Dr. Harold M. Camp, secretary of the Illinois State Medical Society, considers that county medical society secretaries might well be classified similar to risks for life insurance according to the plan known by insurance men as the "numerical rating of risks." According to this plan, the ideal risk is given a rating of 100 per cent. All features in connection with the risk which would lower his rating are placed in one column, and those decidedly to his advantage are placed in another. By consulting these lists, he is given a definite percentage rating.

The management of a county society falls into the hands of one member, its secretary, and his is a grave responsibility. The success or failure of the society is principally dependent on the services the secretary renders. He must be energetic, idealistic, good natured, constructive, and broad minded. He must realize and constantly bring to the attention of the society the well-known fact that the real basic unit of medical organization is the county medical society. He must be a salesman—selling the society to prospective as well as potential members. He should not only endeavor to retain his membership from year to year, but should make every effort to increase it until every eligible and reputable practitioner in his county is a member. He should realize that his responsibilities are not only to the local society, but also to the state society and the parent organization, the American Medical Association.

In many of our smaller societies, the attendance at the meetings is several times the number of men in the county, the attendance being principally from surrounding counties invited to the meeting. This, of course, requires more effort on the part of the secretary, but unquestionably pays. One of the most frequent troubles in the office of the state society secretary comes through the local secretary not enforcing the by-laws of his society relative to the payment of dues.

The efficient county society secretary will report all new members promptly, sending in his remittance with the report, so that there will be no delay in giving the new member the benefits of the society. The annual dues of members should be remitted at least once a month. A few of our societies send in an annual report at the end of the year which causes much work and confusion within a short period, that should be distributed throughout the year. With this system which we might call the "delayed-report system," the society is compelled to carry the names of many who have been dropped from the membership list, some who have been dead several months, and others who have removed from the state. These, of course, cost the state society a considerable amount of money each year.

The ideal secretary should be informed at all times as to the various activities of his state society, and be able to answer questions from his membership relative to the same. He should know that besides its journal, the society gives the best possible medicolegal protection, the best legislative service, and our highly efficient lay-education organization which has done much good work during the past two years. In addition to these, he should remember that it is possible to arrange for postgraduate meetings by applying to the lay-education committee, and those of you who have already had this newer service realize its value to the county medical societies.

The movements for periodic health examinations and the examinations of preschool children are both going to be major activities, and require a high and efficient degree of team work to make them successful. The county society and its secretary have an important part to play, and the results will be directly dependent on his efforts and assistance. These movements should be talked over in the society meetings.

A successful county society secretary should retain his position as long as he renders the proper services to his society. The practice of changing secretaries as often as the other officers of the society is not good.

ABSTRACT OF DISCUSSION: It is not only the collection of dues that is one of the hardships of the county secretaries, but my worst trouble has been the writing of letters to the different doctors and getting no answer—just simply ignored altogether.

For some time we have been using a method in our society which is applicable to any of the smaller county societies. This method consists in having the members present interesting case reports, assignments being made alphabetically. A case report is something any one can give. These case reports consume only fifteen or twenty minutes, and do much to make the individual member take more interest in the programs of the society.—*Journal of the Illinois State Medical Society.*

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Editorials

THE SEVENTY-SIXTH ANNUAL SESSION

Those who were in attendance upon the seventy-sixth annual session of our State Society, held in Philadelphia, October 11th-14th, enjoyed additional thrills, as the American Legion and the Association of Military Surgeons of the United States were in annual session at the same time. That these meetings coincided with ours was a very happy situation, and one that may never be repeated.

Beneath the rich colors of the Star Spangled Banner and the Tricolor of France, each dyed scarlet with the blood of heroes, the members of the American Legion assembled in their eighth annual convention. Not since that tear-filled, happy day when the men of Pennsylvania's Iron Division, just back from France, marched through her streets in victorious panoply has Philadelphia thrilled to such a military spectacle as the "big parade" of the American Legion, on the first day of the meeting of our Society. It required six hours for the parade to pass a given point. Their name is Legion, and so are their bands! Never before have we been so well serenaded while in session, day and night. Had the line of parade been bordered with laurels, always in bloom, the scene could not have been more significant of homage paid. No heroes of the solemn past, though clad in the linen of Egypt, and the twice-dyed purple of Tyre, could have been received with more acclaim.

Dr. Harry W. Albertson, of Scranton, was installed as President, and delivered the President's address, which was published in the October number of the Journal.

Dr. Arthur C. Morgan, the Philadelphia peripatetic disseminator of intellectual medical pabulum, was elected President-Elect.

We were graced with the presence of Dr. Wendell C. Phillips, President of the American Medical Association, who delivered an address, his theme being the reorganization of medical education. He made an appeal for the medical student to be taught more of the art of medicine, though not less of the science of medicine. He deplored the lack of the present-day student, without the personal touch of a preceptor. He urged that more be done to prepare the student for general practice, and not for a specialty. The necessity of teaching health laws was stressed.

The Committee on Scientific Work is to be most heartily commended for the program as arranged and executed. The ringing of the bell, indicating time allotted for reading and discussion of papers and for other assignments requiring its use, now has had a two-years' trial, and easily has demonstrated the necessity of permanently adopting this procedure at our annual sessions. The case reports were very instructive, and should be continued. The dry clinics given by the various sections were well attended, showing a demand for such, and should be incorporated in the program each year. The local Committee on Arrangements is deserving of great praise for its most efficient services in preparing for and carrying through to a happy fruition a most successful meeting.

We are grateful for the very delightful participation by the distinguished guests.

This year the public meeting was transferred from Thursday evening, to Wednesday evening, preceding the President's reception. Based upon the expression of approval, we should recommend that henceforth this arrangement be made permanent. Dr. Victor G. Heiser, of the Rockefeller Foundation, was the speaker at the public meeting, and delivered an intensely interesting

and instructive address on public-health problems.

The value of periodic health examinations was urged. People should be warned that they are subject to disease. A health service that does not inquire into the subjects of food, personal hygiene, and mental attitude toward life is not a health examination, but an ordinary physical examination. People are tired of hearing physicians make diagnoses which are later confirmed by autopsies.

In the reorganization of the Board of Trustees, Dr. W. T. Sharpless of West Chester, was elected chairman, to succeed the retiring chairman, Dr. Jay B. F. Wyant, of Kittanning. During the several years that he was chairman, Dr. Wyant conducted the affairs of the Trustees with dignity and decorum. The best interests of the Society were uppermost in his activities, and grateful appreciation was extended to Dr. Wyant for the services rendered while chairman. Dr. Wyant will continue as Trustee and Councilor.

The councilor districts were reapportioned, and in so doing, a new one, the eleventh councilor district, was established. This district includes Bedford, Cambria, Greene, Fayette, and Somerset counties. Dr. A. E. Crowe, of Uniontown, was elected Trustee and Councilor for the new district.

A new section, Urology, was created, thus making a total of six sections.

At the twenty-first annual conference of secretaries of component county medical societies, Dr. P. A. Noll, Secretary of the York County Medical Society, asserted that public-health nurses in many counties throughout the State, are usurping the functions of physicians, and virtually practicing without a license, which is illegal under the law, and that steps should be taken to limit nurses strictly to the field of nursing, with regulations to prevent their encroachment on the practice of medicine. Dr. Noll charged that in many instances, public-health nurses assigned to public schools are making medical examinations and diagnoses, and treating minor ailments, which are purely medical functions. Nurses also, to a certain extent, are replacing physicians in industrial plants, and where formerly a company physician was employed, the corporation engages a nurse to supervise the health problems of its employees. This condition of affairs has been precipitated as a result of the overtraining of nurses.

The opinion was obtained of each secretary present of the reaction of nine months of the Pennsylvania Annual Registration Law. Various opinions were given. Dr. Walter Estelle Lee was present, representing the Board of Medical Education and Licensure of Pennsylvania, and spoke as follows:

"I am agreeably surprised at the tolerant attitude which you all have toward our first attempt at enforcement of registration. Though individually you can have no realization of the difficulties of the situation, I assure you they are far greater than any of us anticipated. I feel that I can take back to the Board the report of your full understanding of the situation.

"The fact that within three months after the mailing of the registration cards, over 90 per cent of them had been returned with the required fee is the best evidence that can be offered of the type of physicians we have in the State of Pennsylvania, especially in view of the fact that a very large proportion of the physicians felt that it was an imposition and an unjust personal tax.

"We must realize that this principle of registration is not peculiar, and that it has not been applied to the medical profession alone. It is generally enforced at the present time in nearly all of the States, and in Pennsylvania the medical profession was the only one, until this act was passed, that did not register annually and pay a fee. Thus, the undertakers, engineers, pharmacists, and nurses all have yearly registration, and most of the fees are very much higher than that paid by the physicians. Probably most of you have read the recent Registration Act which has been passed by the State of New York with an annual fee of $2.

"Dr. Wendell Phillips, President of the American Medical Association, has told you that this is a principle that has long been recognized; in other words, that the individuals who are benefited by a special law are usually called upon to finance the enforcement of it.

"Several of the secretaries have referred to the Board's inspector obtaining from them lists of the illegal practitioners of the community, nothing further having been heard of the matter. In explanation, we will say that we have made a careful survey of the State and obtained a fairly accurate list from the various secretaries of the county medical societies of the illegal practitioners. In all, there are some 900 in the State at the present time, and it is our purpose to select from this group the most flagrant cases and prepare them for trial. This leads up to the crux of the whole situation, and that is, the difficulties that are presented by a prosecution of illegal practitioners of medicine. The details of these difficulties I hope most of you will not have to experience, and this is neither the time nor the place to discuss them publicly. We have

been thwarted at every turn, and have finally found that it is necessary to ask of the Attorney General the assignment of a special counsel to prepare our cases for us and to interpret the law very frequently to the local judges, drawn from the community in which the case is tried. An abstract from the letter written by Mr. McNees, the representative of the Attorney General's office, states the situation: 'In addition to these points which I have outlined, you must realize, as many medical men do not, that the public is against you. This is a broad statement and should probably be limited to saying that that part of the public which attends these trials, and out of which juries are usually picked, is against you. It is very difficult to persuade the man on the street that chiropractors have not done a great deal of good, and that they should not be allowed to practice. He pays no attention to the qualifications of the chiropractor or to whether or not he may be licensed or registered.'

"As a member of the Board of Medical Education and Licensure, I wish to make an appeal through this group of secretaries to your various members that in addition to submitting to this registration act, the physicians of this State feel that it is a further part of their duty of enforcement so to educate their individual communities to the dangers from illegal practitioners of medicine that we shall be able to obtain juries from their individual communities upon whom we can depend for the conviction of these individuals. I feel that the whole question is one of educating the community to the dangers of ignorant practitioners of medicine. I feel further that until the community understands and believes this, it will be impossible by any legal procedures to force them to protect themselves against something which they ignorantly think they want. The Board, therefore, has followed a policy of caution. We have made a careful survey of the unlicensed and also the illegal practitioners in the State. The unlicensed practitioners we have practically eliminated. The illegal practitioners we feel at the present time welcome prosecution. With the communities and the juries acquitting them practically always, it is the best and cheapest form of advertising that they can obtain. The Board feels that we should be even more careful in the future than we have been in the past in bringing these cases to trial, and we ask you to take a part in this program which no one else can do, namely, to educate the public to the dangers of inefficient, ignorant, illegal medical practitioners."

The Woman's Auxiliary of our State Society was very active in its endeavors to entertain the visiting women. The greatest credit is due them for the unselfish manner in which they diligently and indefatigably applied themselves to this very pleasant duty.

The Committee on Scientific Exhibits is to be congratulated upon the eminently practical demonstrations that were arranged as part of an intensely interesting exhibit.

The Commercial Exhibit was of a high order, and the exhibiting spaces were all sold. We urge our membership to bear in mind our exhibitors in a practical way.

The Philadelphia County Medical Society was host upon this occasion to the State Society, and its traditional hospitality seems to have outdone itself in the heartiness and scope of the reception. Our unstinted praise and appreciation is poured out to them.

The 1927 session will be held in Pittsburgh. Any one desirous of reading a paper, presenting a case history, or otherwise being placed upon the scientific program, should apply to the chairman of the Committee on Scientific Work at the earliest possible moment, as the programs for our annual session are usually completed months ahead of the meeting.

PUBLICATION OF CONSTITUTION

On page 98 of this issue will be found the Constitution and By-Laws of the Medical Society of the State of Pennsylvania (with all the amendments) brought up to date. The Councilors and members of the House of Delegates are especially urged to familiarize themselves with it.

THE VALUE OF A COURSE OF LECTURES ON MEDICAL ETHICS IN THE MEDICAL CURRICULUM

In the October, 1926, issue of *California and Western Medicine* is an article by Dr. Rexwald Brown on "Is Medicine Drifting Into Lay Control?" in which the author concludes as follows:

"A cloak of mystery has far too long been wrapped about the science of medicine. The disciples must tear it aside. The public must be taught that physicians are not in league with occult forces, that medical knowledge, like all other scientific knowledge, is subject to the laws of verifiable fact, that medical knowledge is not divisible into sects, and that no knowledge is of more worth than that which conduces to self-preservation and the continuance of the race. The studies essential for acquiring such knowledge, the ways of incorporating such knowledge into the fabric of civilization and the methods most valuable in acquainting the public with fundamental medical truths are preëminently the affairs of organized scientific medicine and not those of the lay public."

In this article Dr. Brown makes the following statement:

"The teaching of the science of medicine needs drastic revision so that a new tide of thought may sweep through the classrooms of the medical schools. In addition to studies in the science and art of medical practice, a new course must be given inculcating students with knowledge of their high responsibilities as lawgivers to the people and as teachers of health. Graduates of today tell that during their years of study little or nothing is given them of the history of medicine through the centuries, of the relationship of medicine to life at large, of the forces ever tending to destroy scientific medicine, of the prejudices and ignorance of an indifferent public, of social spheres where the knowledge of the medical man could be useful, and of the worth of medicine in helping to advance civilization. And the subject of medical ethics which looms up so prominently after graduation is given only cursory consideration in most schools. In discussions of medical problems, young physician graduates of outstanding medical colleges have been heard to say that their introduction to ethics consisted of their being handed the *Principles of Ethics* at or about the time of their graduation."

The faculty of one of the medical schools in Pennsylvania, fully cognizant of this situation, several years ago approved including in the curriculum a course of lectures on the history of medicine and medical ethics. One lecture a week for half the term is delivered each year to the freshman class on the history of medicine and the Dean delivers a course of ten lectures each year to the senior class on medical ethics, organization, and pastoral medicine. A copy of the *Principles of Ethics* of the American Medical Association is given to each member of the graduating class, but its contents are amplified in the lectures, as many references therein must be elucidated.

Under "pastoral medicine" is detailed the relation of the physician to the teachings of the Roman Catholic Church, so that the non-Catholic physician may know the attitude of the Romanist in regard to medical homicide and the administration of baptism, and may have no excuse not to render proper services to the Catholic patient. On the other hand, the attention of the Catholic physician is called to the rights of the non-Catholic patient, that he may observe the same, and withdraw from attendance upon such patients who may require medical attention contrary to the tenets of his own faith. The knowledge of pastoral medicine is most essential to every graduate in medicine. It is of interest to note each year the number of Catholic students, listening to this course of lectures, who state that many of the problems discussed are new to them. We should suggest that any physician interested in pastoral medicine read *Moral Problems in Hospital Practice* (3d Edition), by the Rev. P. A. Finney, of the University of Dallas, Texas; also *Medical Homicide and Mutilation,* by Austin O'Malley, M.D.

In addition, the following topics are covered. The relation of the physician to the pharmacist, to the dentist, and to the mortician; interviews with reporters; testimonials to trade articles; unscrupulous advertisers; evils of prescribing narcotics; euthanasia; issuing of certificates, medical, birth, death, and lunacy; the courtesy call; dispensaries and private clinics; medical evidence in courts of law; the Workmen's Compensation Act; the Harrison Narcotic Act; exhibitions and shows; animal experimentation; gifts from patients; as to marriages; relation to masseurs, masseuses, electricians, and the cults; relation to the local and state departments of health, every physician a public-health officer; midwives; nurses; opticians and optometrists; the necessity for securing autopsies; the purchase and sale of practices; abortions and abortionists; reading and study; the value of membership in the county and state medical societies and the American Medical Association, also in other special and national societies; the value of hospital association; malpractice; life insurance; military medical services; new remedies; proprietary remedies; and partnership.

There are three principles which may be regarded as the cornerstones of medical ethics: (1) In the relation of a medical practitioner toward his colleagues, he should obey the golden rule. (2) In his relation to his patients, their interests should be his highest consideration. (3) In his relation to the State, to the laws of his country, and his civic duties, he should obey all lawful authority.

THE MOHONK CANCER SYMPOSIUM

The Symposium on Cancer Control held at Lake Mohonk, N. Y., September 20th-24th, was significant in that all phases of present knowledge of this mysterious disease were there summed up. Eminent specialists from all over the world were present, and twenty-seven carefully prepared papers were read and discussed. While there were differences of opinion regarding the causation of cancer, the meeting was unanimous in approving the large and important steps to be taken for the better control of the disease.

A resolution passed by the assemblage proposes to form an international federation in order to bring about more meetings similar to the Mohonk Symposium and publish in at least three languages an index and abstracts of all papers on cancer which appear anywhere in the world. This proposition was referred to the many national societies for the control of cancer, with a recommendation that the plan, or a

similar one, be adopted if, upon further study, means could be found for deferring the cost of this work.

This recommendation is deserving of earnest study, since, according to Dr. William H. Welch, of Johns Hopkins University, "there was never a time when tuberculosis presented problems of such magnitude" as does cancer at present. "However inadequate our knowledge is today, it is an obligation of the profession to the general community that every effort be made to control this scourge."

The official statement approved by the meeting is appended.

Although the present state of knowledge of cancer is not sufficient to permit of the formulation of such procedures for the suppression of this malady as have been successfully employed for the control of infectious diseases, there is enough well-established fact and sound working opinion concerning the prevention, diagnosis, and treatment of cancer to save many lives, if this information is carried properly into effect.

1. The causation of cancer is not completely understood but it may be accepted that for all practical purposes cancer is not to be looked upon as contagious or infectious.

2. Cancer itself is not hereditary, although a certain predisposition or susceptibility to cancer is apparently transmissible through inheritance. This does not signify that, because one's parent or parents or other members of the family have suffered from cancer, cancer will necessarily appear in other persons of the same or succeeding generation.

3. The control of cancer, so far as this subject can be understood at the present time, depends upon the employment of measures of personal hygiene and certain preventive and curative measures, the success of which depends upon the intelligent coöperation of the patient and physician.

4. Persons who have cancer must apply to competent physicians at a sufficiently early stage in the disease, in order to have a fair chance of cure. This applies to all forms of cancer. In some forms early treatment affords the only possibility of cure.

5. Cancer in some parts of the body can be discovered in a very early stage, and if these cases are treated properly the prospect for a permanent cure is good.

6. The cure of cancer depends upon discovering the growth before it has done irreparable injury to a vital part of the body and before it has spread to other parts. Therefore, efforts should be made to improve the methods of diagnosis in these various locations and the treatment of the cancers so discovered.

7. The public must be taught the earliest danger signals of cancer which can be recognized by persons without a special knowledge of the subject, and induced to seek competent medical attention when any of these indications are believed to be present.

8. Practitioners of medicine must keep abreast of the latest advances in the knowledge of cancer in order to diagnose as many as possible of the cases of cancer which come to them.

9. Surgeons and radiologists must make constant progress in the refined methods of technic which are necessary for the diagnosis and proper treatment not only of ordinary cases but of the more obscure and difficult ones.

10. There is much that medical men can do in the prevention of cancer, in the detection of early cases, in the referring of patients to institutions and physicians who can make the proper diagnosis and apply proper treatment, when the physicians themselves are unable to accomplish these results. The more efficient the family doctor is, the more ready he is to share responsibility with a specialist.

11. Dentists can help in the control of cancer by informing themselves about the advances in the knowledge of the causes of cancer, especially with relation to the irritations produced by imperfect teeth and improperly fitting dental plates. They can also help by referring cases of cancer which they discover to physicians skilled in the treatment of cancer in this location. It may be doubted whether all dentists fully realize the help which can be obtained from x-ray photographs in revealing not only the state of the teeth but the condition of the bone surrounding them.

12. Medical students should be instructed in cancer by the aid of actual demonstrations of cancer patients, and this to a sufficient extent to give them a good working knowledge of the subject.

13. The most reliable forms of treatment, and, in fact, the only ones thus far justified by experience and observation, depend upon surgery, radium, and x-rays.

14. Emphasis should be placed upon the value of the dissemination of the definite, useful, and practical knowledge about cancer, and this knowledge should not be confused nor hidden by what is merely theoretical and experimental.

15. Efforts toward the control of cancer should be made in two principal directions: (1) the promotion of research in order to increase the existing knowledge of the subject, and (2) the practical employment of the information which is at hand. Even with our present knowledge many lives could be saved which are sacrificed by unnecessary delay.

MENTAL ILLNESS

A recent visitor to a mental hospital, in commenting on his tour of inspection, is quoted as saying: "The progress in the care and treatment of this great group of patients has been marvelous indeed, but what to me is most striking is that the entire personnel, in speaking of the patients or their condition, use the term 'mentally ill'—a term most pleasing indeed, for in my section they call them lunatics, crazy, insane, etc."

His section does not stand aloof in this respect, nor does his profession. Sections, professions, and some physicians are using terms long since discarded by those interested in progressive mental medicine and the patient's welfare. An exception to this, however, is found in legal progress in the best usage. At present, when the majesty of the law asks "Is this patient sane or insane?" on affirmation, the Court decrees "John Smith is a lunatic." Possibly the visitor's descendants in fifty years may say: "The judicial decree is certainly progressive. I read that John Smith has been declared mentally incapable due to temporary or permanent mental illness." Possible? Certainly it is possible. A few years ago the law designated "Pennsylvania State Hospitals

for the Insane." The statute now reads "Pennsylvania State Hospitals," a term which carries with it modern methods, modern ideas.

Public opinion can change many things. So, as physicians, let us by example aid in molding this opinion in favor of the use of the term *mental illness,* in order that such appellations as are objectionable or scientifically meaningless may no longer appear in statutory or popular usage, but may find their proper setting in the discard of the past.

SUPERMEN AND SUPERHEALTH

"The superman will never materialize without superhealth," according to President Phillips of the American Medical Association, in an address published in this number of the Atlantic Medical Journal. It seems strange that men have been so long in realizing so obvious a truth; yet the fact remains that for centuries past they have attempted to attain holiness by denying the body, and only within exceedingly recent times has much attention been paid to physical development as an adjunct to mental and spiritual growth.

Now that the idea has taken root, people are more and more demanding facilities for proper care of those "temples of the Holy Spirit," their bodies. The standard of living is steadily rising, intelligence is on the increase, and the medical profession will have to adapt itself to new conditions that have developed with startling rapidity. The people are demanding prevention instead of cure; they want regular physical examinations; they want to be shown the way to better personal and community health, and are waiting only for leadership.

Who will supply this leadership? Will the medical profession rise to the occasion, or will the people be forced to turn to lay or commercial organizations? The opportunity is great, and it is immediate, but who is going to reap the harvest?

At least half the papers published in this Journal stress the importance of *early* diagnosis and *early* treatment. No matter what the disease may be, the hope of cure is inversely proportionate to the delay in diagnosis and treatment. The whole emphasis of scientific medicine is on *prevention.* The study of nutrition is just beginning to find its place in the sun, and the information has but recently leaked out that astonishing results can be obtained by balanced feeding, sufficient sunlight and fresh air, proper exercise, and correct living conditions of all kinds.

During the middle ages the average life expectancy was some 18 years. Now it is triple that, and during the last few decades a dozen years have been added to the life span. Truth to tell, much of this addition has occurred in the first decade of life, and it would be interesting to know the actual reduction of mortality above 50 years. We have never seen the figures if they are extant. It is a safe guess, however, that the addition to life in the latter years does not begin to compare with the saving of infant life.

Preventive medicine, however, and particularly the periodic physical examination, does not now need to concern itself so greatly with saving of infant mortality. Its aim is to prevent many of the ailments that make of old age a burden, and to lengthen the years after man has attained the experience that makes his death an economic loss.

This is not a matter for organizations and resolutions. It is a matter for the individual physician, whether he practices at the country crossroads or in the metropolis of medical learning. Every patient is an individual problem, and while the medical organization may point the way, the family doctor is the deciding factor. He it is who must point out to his patients the way to health. He it is who must be in the van of community health movements. He it is who must supply the leadership for which the people are waiting. He alone occupies the strategic position which lends authority to his commands. The place is his if he will assume it. But if he does not, what then?

A REPORT OF THE KENTUCKY STATE MEDICAL SOCIETY

The seventy-fifth annual session of the Kentucky State Medical Association was held at Frankfort, September 20th-23d. We congratulate the Blue Grass State on celebrating its Diamond Jubilee. During one of the evenings the surgical section gave its annual program on a barge on the Kentucky River. Truly, they must be on the water wagon, down in ole' Kentuck!

The following abstract of the report of the Council of the Association, taken from the *Kentucky Medical Journal,* should prove interesting and valuable reading to our members:

The two major activities of the Association, outside of its routine organization work, are the publication of the *Journal* and the medicolegal program and medical-law enforcement. For the past five years the Association has coöperated with the State Board of Health in the enforcement of medical-practice and other health laws. For the first two of these years this coöperation cost $2,400 a year, for the third year $1,500, and for the fourth $300. Last year the Council recommended that this work be continued at a cost not to exceed $1,200, but the State Board of Health was able to carry on

the work at a cost to the Association of only $150. We have been informed, however, that they will not be able to continue this work during the next year without assistance from us, and we recommend that the work be continued at a cost to the Association not to exceed $1,500.

Unjust blackmailing malpractice suits continue to be brought against reputable members of the profession about as often as for each year of the past two decades.

Again this year a considerable number of physicians have been convicted in the State or Federal courts for violation of the narcotic or prohibition laws. Acting on your instructions, the Council has preferred charges against each of them before the State Board of Health, with a view to the revocation of their certificates. The Council is informed that the Federal authorities are now making a check of prescriptions for alcoholic beverages, and it is astounded at the information that it is finding the names of prominent physicians signed to prescriptions containing the names of people whom they have not only not examined but it has frequently been found that they have been out of town at the time of issuance of prescription, and that in numerous instances these prescriptions were filled for the physicians themselves. Such a procedure is absolutely inexcusable, and any member of our profession who prostitutes the privilege conferred upon him by law, to secure whiskey or other alcoholic beverages for social or other illegal purposes, deserves no sympathy when he is indicted, fined, and imprisoned. The Council, acting under your repeated instructions will continue to prefer charges, looking to the revocation of the right to practice medicine in the State of every physician found guilty in the State or Federal court of the violation of either the Harrison or the Volstead Act.

During the year, a number of physicians who have failed to keep themselves in good standing have found that they had to bear the entire expense of their own protection from malpractice suits because they had delayed sending in their dues and were not in good standing.

The Association has secured possession of the Irvine McDowell home at Richmond, which has been willed to it by the late Mrs. Elizabeth Irvine, granddaughter of Ephraim McDowell and also of Isaac Shelby, the first governor of the State, and now Kentucky will have one of the finest and best institutions for the care of its people who suffer with trachoma in the whole world. This institution will be conducted as a memorial to the Father of Surgery, Ephraim McDowell. Priceless relics of Kentucky's early history will be housed in cabinets in the offices of the institution, and it will be a Mecca for physicians from the whole world.

During the year the Council has made a careful study of the principles underlying, and the administration of the Medical Practice Law. A unique feature of the administration of the law in Kentucky has been the prevention of false and misleading advertising which has continued in most other states.

Under the operation of the Sheppard-Towner Act, as adopted and approved by this Association, numerous clinics for pregnant women and young babies have been organized throughout the State. No work which has ever been undertaken by the profession has proved so popular or more profitable.

It should be realized by the members of the Association that the *Journal* has been published because of the continued active support of our advertisers, and we desire again to urge the House of Delegates to take steps to bring the importance of the patronage of these advertisers before the various county societies, as advertisers pay for the publication of the *Journal*. The value of the *Journal* to every doctor who reads it is apparent. This Association guarantees the financial integrity of the advertising columns of the *Journal*. For these reasons, we feel we have a right to ask our members to patronize the advertisers, or at least to give them the opportunity to secure their patronage, others things being equal.

The same remarks apply to the exhibits at the annual meetings. These exhibitors pay the expense of the meetings. They are carefully selected from among a much larger number of applicants by a special committee of this Council, and they exhibit before us the various improvements in medical and surgical technic in a way that would be impossible without them.

In quite a number of counties the Council has noted with enthusiastic approval the very effective work of the Woman's Auxiliary. They have sponsored public meetings, have prepared papers on health and medical subjects, to be read before women's clubs, church organizations, teachers' institutes, have sponsored the baby clinics, have helped in securing patients for other clinics and attendance at the lectures, and have made themselves generally active in promoting the welfare of the profession to which they are attached.

THE PHYSICIAN AS A MOTORIST

From time to time we have issued a note of warning to the physician as to the responsibility he assumes in giving a lift to children and adults, as he drives his car on the highways and byways.

A recent Long Island damage case will bring the matter more vividly to his attention. A chauffeur, while driving a privately owned motor car, gave two children a lift. They sustained an injury while in the car. A jury awarded $20,000 damages to the father of the children. There are similar cases in the courts of practically every State. The courts have no sympathy, at trial, with the motorist as to the courtesy he may be extending, or the kindness he may be doing to the pedestrian. The motorists' responsibility is not lessened one iota.

JOTS AND TITTLES

Scientific Developments

One of the most important scientific developments of recent times is the work done on the cathode ray by Dr. W. D. Coolidge, research physicist of the General Electric Company, and inventor of the Coolidge x-ray tube. Scientists have known for years of this ray which passes between the cathode and anode inside the x-ray tube, but it has remained for Dr. Coolidge to devise a method of projecting it. The ray consists of electrons projected into space at a rate equal to four fifths the speed of light. It is said to be of the same type as the beta rays given off by radium, but of a different velocity. The rays, however, can be shut off by a cardboard screen. The new cathode tube is portable, and when in use looks as though surrounded by a ball of purplish haze. Different mineral substances, when rayed, will give forth different colored light, and will continue to glow for hours after radiation. It has a very peculiar effect on many chemical substances, and it is stated that foods exposed to the ray will cure rickets in experimental animals. It destroys plant and animal life very quickly, and, turned on a mouse for a fraction of a

second, will cause the body to disintegrate without seeming to char the tissues. Dr. Coolidge gave a demonstration before the Franklin Institute, Philadelphia, on October 20th, which aroused great interest. As yet, no therapeutic application of the ray has been worked out, but Dr. Coolidge's invention makes further study possible, and may pave the way to epoch-making developments in the medical and scientific fields.

THE INTERIOR OF THE STOMACH has been photographed for the first time by Dr. Hans Elsner, head of the Charity Polyclinic, Berlin, Germany, who is reported to have used a high-power optical system, replacing the gastroscope's white lamp with a blue one.

THOSE WHO ATTENDED THE SCIENTIFIC EXHIBIT at our recent meeting were much interested in the exhibit from the Henry Ford Hospital, Detroit, Mich. It represented the results of a study on the effect of hard roentgen rays on the kidneys when projected through the body wall, and was of particular interest because of the possibility of renal and vascular damage produced as the result of therapeutic courses of irradiation. Physicians who have observed such cases, have been requested to communicate with the hospital.

IT IS REPORTED THAT A CENTRIFUGAL WASHING PROCESS for blood sera has been perfected by scientists in Prague, Bohemia, which will make it possible to use even the blood of oxen and sheep for transfusions. Dr. John L. Yates, of Milwaukee, Wis., therefore, predicted at the recent session of the Interstate Post-Graduate Medical Assembly, that blood for transfusion may soon be obtained in bottles from the drug store.

DR. JAMES F. COUCH, of the U. S. Bureau of Animal Industry, has recently shown conclusively that so-called "milk sickness" in human beings is closely related to the disease known as "trembles" in cattle. The cause is the eating, in either the green or the dry state, of certain poisonous plants, and even though the animals may not appear to be affected, their milk and butter may be highly dangerous to the human who consumes them. In the East and Central West the poisonous plant is the richweed, also known as white snakeroot. In Texas and New Mexico, where the animal malady is called "alkali disease," the rayless goldenrod is the offender. The report states: "Animals may be poisoned by the dry richweed plant—such as in hay—in winter, but still not have trembles. This fact is due to the presence of three poisonous substances in richweed, only one of which causes symptoms of trembles in cattle and milk sickness in human beings. This poison, which is a complex alcohol, has been named 'tremetol.' The other two poisons are a resinous acid and a volatile oil." Dr. Couch has developed a laboratory test for tremetol. Directions for making the test, which is best performed by laboratory workers, physicians, or druggists, will be furnished on application to the Pathological Division of the Bureau of Animal Industry, United States Department of Agriculture, Washington, D. C.

COD-LIVER OIL is now recommended in the production of healthy teeth. Says *Children, The Magazine for Parents:* "The first and easiest way out of the dilemma is to begin, when a child is three weeks old, to give it three drops of cod-liver oil twice a day, then six drops, and so on gradually, day by day, increasing the dose until two or three teaspoons are given."

THE IDEA THAT TO REQUIRE A LEFT-HANDED CHILD to write with his right hand may impair his brain power has been dispelled by an investigation made by the department of commercial education of the Philadelphia Board of Public Education. A recent report on "Handedness" prepared by John G. Kirk, director of the department, states that "The general decree of teachers in the primary grades of public schools is that the majority of left-handed pupils may safely be taught to write with the right hand without incurring any subsequent harmful effects."

Medical Publications

THE PUBLIC HEALTH BULLETIN No. 155, issued by the United States Public Health Service, presents a striking report on "The Course of Cancer Mortality in the Ten Original Registration States for the 21-Year Period, 1900-1920," prepared by Surgeon J. W. Schereschewsky. The author concludes that in the area studied, there has been an apparent steady increase in the cancer mortality rate which, on the basis of the crude death rates, amounts to 56 per cent; that "about two thirds of the increase observed in the cancer death rate of persons 40 years and over is due to an *actual* increase in the mortality from the disease"; and that there is some evidence of increased susceptibility to cancer in persons under 40, especially pronounced in breast cancer. "The question at once arises, 'What progressive factor or factors characteristic of modern phases of social organization and development have been operative to cause this increase?' Determined assiduity in all phases of this problem may still yield the answer."

THE CHILDREN'S BUREAU OF THE UNITED STATES DEPARTMENT OF LABOR, Washington, D. C., is engaged in the publication of a series of folders which will give in popular form the results of the latest research in various phases of child welfare. Those published so far include: Minimum Standards of Prenatal Care; Backyard Playgrounds; Why Drink Milk; What Builds Babies; Sunlight for Babies; From School to Work; Community Care of Dependent, Delinquent, and Handicapped Children; Breast Feeding. Single copies may be had free upon request. Prices in quantity will also be given upon request. All the folders are illustrated.

BEGINNING WITH THE JANUARY, 1927, issue, the *Radiological Review* will be published monthly instead of bimonthly, and it will increase its number of pages from 32 to 64. The *Review* is to be congratulated on this extension of its activities.

Organization Activities

THE FIRST INTERNATIONAL CONGRESS ON SEXOLOGY was opened in Berlin, Germany, on October 10th, in the presence of 250 delegates representing 30 nations. Numerous papers were read relating to race and nationality problems, heredity, rejuvenation, sexual psychology, eugenics, and birth control. An interesting statement made at this meeting was that a single organism can undergo complete sex transformation in the course of its lifetime and change from female to male. Such changes have been observed in pigeons, upsetting all previous theories regarding the origin of sex, according to Professor Riddle, of Columbia University.

THE PAN-AMERICAN CONFERENCE OF DIRECTORS OF PUBLIC HEALTH, held in Washington early in October was attended by representatives of eighteen nations of the western hemisphere. A resolution was adopted pledging coöperation in exterminating the fleas found on rats in seaports, which are responsible for the spread of bubonic plague. Dr. Manuel Villaroel, of Bolivia, expressed the idea that "Not only has the meeting discussed many important health topics and given us much to take back, but it has, above all, linked the American republics closer together."

At the International Antivivisection and Animal Protection Congress held October 17-19, at the Bellevue-Stratford Hotel, Philadelphia, over 150 delegates were present. At a public lecture in the ballroom by Lieutenant Colonel Donegan, the subject presented was "Our Four Combined Enemies—Vivisection, Vaccination, Vaccines, and Vested Interests." Quite a contrast to the subjects presented the week before!

The White Cross, international antinarcotic society, has resumed publication of its bulletin, temporarily suspended because of lack of funds. A New York organization has been completed recently, and Dr. David Starr Jordan of California, Gov. Alfred E. Smith of New York, and Honorable Stephen G. Porter of Pennsylvania have accepted appointment as honorary vice-presidents. An appeal is made for funds to carry on the work. Membership is one dollar per year and upward, and may be sent to the White Cross, 541-543 Henry Building, Seattle, Wash.

Under the auspices of three large nursing bodies and three large medical organizations, the American Public Health Association, and representatives of the field of education and of the public, an organization has been formed known as the Committee on the Grading of Nursing Schools, which will make a survey of the nursing situation. The headquarters have been established in New York, with May Ayres Burgess, Ph.D., a statistician, in charge, and a beginning has been made by a survey in New York City. It is suggested that one of the final results will be the extension of the visiting-nurse system.

Public Welfare

"The industrial life of America and the health and well-being of our people," says Herbert Hoover, "are clearly dependent on future applications, by engineers and physicians, of new discoveries in the physical and biological sciences. If we are to go on increasing our population, we must either advance in scientific discovery or we must recede in our standard of living."

That illegal employment of school children has decreased 45 per cent this year over 1925, is stated in a report recently issued by Henry J. Gideon, director of the Bureau of Compulsory Education, Philadelphia.

In one month this year $1,050,000 was paid to families and individuals under the provisions of the Workmen's Compensation Law. During the first six months of the year, an average of 461 persons were injured daily.

Dr. Vernon Kellogg, Secretary of the National Research Council, has recently stressed that "economic conditions in Europe since the war have placed squarely upon America the burden of advancing scientific research.....Research takes more than the possession of the necessary money; the thought of the nation must be definitely directed along the proper lines."

In order to provide hospital care for the patient of moderate means who does not wish to accept charity, Alba B. Johnson, Philadelphia, a trustee of Jefferson Medical College, has proposed before a meeting of the American Hospital Association that an effort be made to provide endowment for hospitals, similar to the endowment of colleges and universities, which will permit a per-diem rate of about $2. This suggestion has met with general approval, and it is probable that the idea will be tried out.

In a recent statistical report it is estimated that 2,500,000 tons of soot are to be found annually in the atmosphere of London. Fireplaces, it is stated, produce five times as much soot as do industrial furnaces. Persons living in the country enjoy twenty per cent more sunlight than the citizens of London.—*Medical Journal and Record.*

Mr. H. M. Haines, Acting Chief of the Section of Restaurant Hygiene, in an article in the *Listening Post* truly says that while our State boasts of its highway system, it does not boast for one moment of the hot-dog stands that infest the highways. "The State Department of Health has no authority to close these stands, nor is it likely that any other State Department has such power. County authorities might do it if they will exact a heavy license fee." In 1925 the Division of Restaurant Hygiene inspected 5,352 eating places (from the best conducted to the lowest roadside shack), of which 60 per cent were the roadside stands. It eliminated at the country hotels 150 common towels and 260 common drinking cups. The solution of the problem is the elimination of the stands. This can best be accomplished by the motoring traveler not choosing such eating places, but patronizing the decent restaurant or hotel.

The necessity for research work on diseases of the heart was emphasized by Dr. Don M. Griswold, of the University of Iowa, in an address before the American Public Health Association. He advocated that state and municipal health departments put pressure on research work to determine the cause, course, and results of heart disease, saying that when these facts are known, health officials should carry on an extensive educational program for the purpose of lengthening life.

Medicolegal

A chiropractor in Michigan, prosecuted for violation of the Medical Practice Act by practicing medicine without a license, contended that the act requiring registration and fixing qualifications of all persons practicing medicine is unconstitutional, unreasonable, arbitrary, and violates the Federal Fourteenth Amendment; and insisted that the statute operates to prohibit chiropractors from obtaining a license because it requires them to pass an examination in subjects not taught in chiropractic schools, and which are not used in the practice of their profession. The court ruled that it was within the legislative power to require a knowledge of such subjects, and that the fact the defendant had not received instruction in some of these subjects offered no objection to the validity of the law.

"Doctors, in the course of their professional duties, meet practically every citizen in the State once a year," said Thomas Raeburn White, in an address before the Philadelphia County Medical Society. "With such an opportunity, they could do much to direct the people to vote correctly."

A bill is in course of preparation to strengthen the authority of the Sanitary Water Board of the State. This will be introduced into the next Legislature, and will confer authority on the Board to require installation of devices to remove deleterious substances from water discharged into running streams by industrial firms. The Board is composed of representatives of five departments of the State Government.

Attitude of Medical Laboratories to Visitors

Medical laboratories, including the animal rooms, are always open to the public, according to an announcement made by the American Association for Medical Progress. After making a survey covering virtually all of the medical colleges and research institutes in the United States, the Association found that responsible

visitors are welcome at all times, and that several of the laboratory directors extend special invitations to officers of humane societies in order that these officials may, if they choose, observe for themselves the manner in which the animals are cared for and the conditions under which they are used for experimental purposes.

A few of the laboratories, the reports show, prefer visitors who have seen an operation performed on human beings. "Only in this way," writes one of the directors, "can visitors appreciate in any degree the similarity between the two and the care taken against inflicting pain and avoiding infection."

Besides maintaining a policy which encourages inspection of laboratories by any one who may be properly interested, these institutions have all adopted a set of rules governing the custody, care, and use of laboratory animals. All operations must first be approved by the laboratory director and all animals used must be rendered insensible to pain if the operation is likely to cause greater discomfort than that attending anesthetization. Exceptions to the use of anesthetics can be made by the director alone and then only when anesthesia would defeat the object of the experiment.

HOSPITAL ACTIVITIES

Hospital May Lose Its Bequest.—An interesting lawsuit is pending in the state of Montana, where a hospital has been bequeathed a sum of $200,000 but where a legal technicality may prove a bar to inheritance. The money is a bequest made by a pioneer stockman whose remote heirs are claiming that the corporate life of the hospital has expired, as the term of twenty years for which the hospital was incorporated has expired and the charter has not been renewed, although the hospital continues to function actively and is doing much charitable work. It will seem a miscarriage of justice if the money is diverted from the object which the stockman undoubtedly intended should benefit by his funds, yet technically the hospital has forfeited its claim by not renewing its charter, and the heirs of the stockman have a real claim. It remains to be seen whether the judges will rule that the "spirit" or the "letter" of the will shall prevail.—*Modern Hospital.*

Hospital Duties From the Viewpoint of the Practitioner.—In an address delivered before the Massachusetts Medical Society recently, Dr. William Darrach, Boston, enumerates the main duties of the hospital as follows: The financial support of the institution. This includes the collection of charges, raising of funds from the public, and their investment and expenditure; the business of administration; the feeding and housing of the patients and staff, and all the housekeeping involved; providing diagnostic and therapeutic facilities for the use of the physician; maintenance of an adequate nursing service; housing of hospital records and making them available at all times; and the determination of the economic and social requirements for admission.—*Modern Hospital.*

Nurse Training Made Attractive.—Crouse-Irving Hospital, Syracuse, N. Y., is a general hospital of 200 beds, established in 1912. The school of nursing was started in 1913. The school has had an average of 100 pupils for the past four or five years, and for several years has had a fairly long waiting list of applicants. The success of the school of nursing is attributed to the eight-hour day, six-day week, and two-year course under which it is operated. Six classes of pupil nurses have been trained and graduated since the adoption of the eight-hour day and six-day week, and the entire course outlined by the New York State Educational Department has been covered in two years' time, with one month's vacation a year. Before adopting this new and modernized system, five classes had been trained and graduated under the regular twelve-hour day or night and three-year plan. Under the new plan the number of applicants increased so rapidly that it was necessary five years ago to raise the entrance requirement to a full high-school course (the legal requirement in New York State being one year of high school). In the meantime, no wages have been paid the pupils, and a tuition fee of $40 for the preliminary course has been required. Pupils in need of financial assistance have received help from a loan fund. Incidentally, the school has had more money to spend on the education and entertainment of its pupils during the regular school terms.

Crouse-Irving does not claim priority in any one phase of its plan, but is one of the first nursing schools to combine the different points into a definite and practical operating plan. Some schools have had an eight-hour day, some a two-year course, and some a full high-school entrance requirement. In explaining these requirements, it is admitted that its purpose is largely to limit the number of applicants attracted by the eight-hour day and two-year course. The desirability of high-school graduates has, however, become more and more apparent. In New York State the law says that the nurse's training shall be not less than two years. The same wording is used in connection with the medical and other professions. A training school, therefore, that requires a three-year course of its pupil nurses would appear to be taking advantage of a technicality to hold the nurses for a longer period of time for its own benefit. The day nurses work from 7 a. m. to 7 p.m., with four hours off duty for meals, recreation, and study and another hour for classes. Each nurse has this schedule five days a week, and is given an extra day off duty during the other two days. It has been found desirable to have the full day off duty split between two days, one of which is Sunday. Night nurses work seven hours a night for one month. The first shift comes on duty at 5:30 p.m. and is relieved at 12:30 a.m., after midnight dinner. The second shift works until 7:30 a.m. Thus both shifts overlap the day nurses, supplying extra help for the busiest hours.—*Modern Hospital.*

How Do You Buy?—Never stock more than sixty days' supply. Always buy by bid in an open competition. Never buy futures, because they do not protect against a decline in price. Avoid personal friendships with the salesmen with whom you are doing business, so that you can always feel free to "drive a bargain." Endeavor to give an interview to all salesmen, if only for a few minutes, as they often have valuable information.—*Modern Hospital.*

Giving From Income.—When a hospital is soliciting donations from citizens of the community, the impression often gained from interviewing the average individual of moderate means is that only the wealthier people should be asked to contribute to hospitals. Too many of the average citizens seem to thing that hospitals are *interested* only in the large sums of money and that the mite they could contribute to hospitals would not make any difference in the long run. The fallacy of such thinking is, of course, continuously exposed in industry and community ventures. Large insurance companies, the hospitalization of certain fraternal organizations, and the work of the community chests have proved beyond a doubt the value of small contributions in accumulating large sums. A notable

example is found in the recent campaign of the Deaconess Hospital, Cincinnati, the details of which are described in our August issue by the Rev. A. G. Lohmann, superintendent of the hospital. This campaign, oversubscribed by $9,000, triumphed because of the preponderance of small subscriptions. Over 6,000 of the 8,000 subscribers were in the group whose donations ranged from twenty-five cents to fifty dollars a piece. Similar results are being recorded in other campaigns in various communities where the bulk of subscribers must make donations from their earnings. For centuries the common people have contributed to the government, churches, and schools by setting aside a certain sum from their yearly or monthly incomes. If the community hospital is to take its place alongside the other social agencies, why should not all the citizens contribute to the hospital from their incomes?—*Modern Hospital.*

What is a Major Operation?—Perhaps no term in medical and hospital usage is subjected to more diversified concepts than is the expression, major (or minor, as the case may be) operation. A few years ago there seemed to prevail an unwritten understanding among a great number of surgeons that all operations requiring a general anesthetic automatically become major. But today when more and more serious operations are being performed with the use of local anesthesia, this method of judging no longer obtains. For ordinary purposes it would seem that the gravity of the operation and the risk entailed to the patient would constitute the basis for differentiation. However, the term as now used connotes widely diversified conditions according to local usage and the point of view, as will be noted from the following quotations showing the varieties of opinion expressed by more than a score of hospital superintendents.

The terms "major" and "minor" are of importance here in determining operating room fees. "Elements to be considered are: the scope of the surgical procedure; the danger of shock; the presence of known complications which add to the risk; the probability or possibility of unsuspected preëxisting surgical complications; the probability or possibility of postoperative complications; the probable duration of the operation; the age and general condition of the patient (presence of intercurrent disease, not directly related to the operation); the degree of mutilation; the amount of pain or mental anguish caused; the nature of the anesthetic used; and the risk of legal complications in the case of an unsuccessful result."

"The definition includes: (1) The setting of fractures of long bones and reducing of subluxations, providing accuracy and efficiency of reduction be demonstrated by roentgen ray taken before and after surgical treatment, and (2) all operative procedures, other than finger and toe amputations, cleansing, draining, and closing wounds, evacuating pus by incisions, the manipulating and reduction of uncomplicated dislocations, the treatment of uncomplicated fractured ribs, the removal of superficial foreign bodies from the eyes, and the removal of subcutaneous foreign bodies."

"The most important factors in defining minor and major are: Whether the patient remains ambulatory; whether a general anesthetic has been given, and the risk for the patient." "The classification as to whether a given case is a major or minor operation will frequently have to be made by the surgeon after the operation is finished."

"Aside from the surgical procedure, operations are classified by underwriters for purposes of adjustment. These classifications, however, are necessarily arbitrary, and vary according to the interpretation of the different companies. I have asked three of our large insurance companies to define a major and a minor operation. Their definitions are: (1) A major or capital operation is one that seriously endangers the life or faculties of the patient; (2) a major operation is one which, of necessity entails a variable period of total disability, the average of which exceeds two weeks; (3) from an underwriter's viewpoint, a major operation is any operation that may effect the longevity of the patient."

"From the surgeon's point of view an operation may be major, but from the hospital's point of view, especially with regard to fixing the operating-room fee, the same operation may be considered a minor one, this view being based on the short time required for the operation, the fact that no general anesthetic was administered, few assistants and practically a minimum amount of operating supplies were used. An operation may be a minor one from the surgeon's point of view in that no immediate serious consequences are entailed, but from the hospital's angle in determining the charge, the operation may be considered a major one in that many assistants, the use of the operating room for several hours, and expensive medicines and supplies may be needed." "In general, the division is one that has in it the element of time and effort consumed, assistance in the adjustment of operating room, and anesthesia charges. I feel that any operation requiring general anesthetic, the use of morphin and scopolomin, together or alone, or the use of more than a minimum of novocain or cocain should be a major operation. I would include in this classification blood transfusions, therapeutic spinal punctures, and cistern punctures." "From an administrative point of view and to determine costs, a major operation could be classed as one demanding prolonged duration, abundance of material and equipment, and a full staff of operating-room personnel."

"I imagine the question comes up because of the varying fees for so-called major operations. In our organization we side-step the question entirely by charging the same fee for all operations performed in the operating room. Outside patients may be brought to our emergency dressing room for so-called minor operations, and for these patients, a smaller charge is instituted. Our method of charging I do not believe is entirely fair because an in-patient would have to be brought to the operating room and charged a regular operating fee for the same type of work an outpatient might have done in the emergency dressing room for a very much smaller fee. I think that each particular hospital has to decide for itself the charges for the various types of work and its policy of regarding places in which this work may be done."

"The present classification of operations as major and minor is most unsatisfactory. An arbitrary rule of thumb, which varies in different institutions, produces operative statistics that are inaccurate and without scientific value. My opinion is that every operation in which a general anesthetic is used should be classed as major. Further, it may be well to consider as major any operation in which incisions are made through tissues below the subcutaneous and submucous layers. This would reduce the minor class to a comparatively small group. The important thing is to secure a uniform definition in accordance with a well-defined standard." "The term major operation is hardly used at all in this hospital, possibly because there are no operating room anesthetic charges, since everything is included in the per-diem charge."

"For purposes of hospital economics, it is our practice to classify as major procedures principally those requiring general anesthesia, one or more scrubbed nurse assistants, and a fully set-up surgical room. Surgical procedures vary so extensively in degree, in consideration of resistance and general constitutional condition of the patient, that I really feel that to try to outline completely what is a major operation, is altogether beyond me, and a rather dangerous question to attempt to set up a standard for its answer."—*Modern Hospital.*

PUBLIC HEALTH

The Radioactivity of Natural Waters.—Every natural water is more or less radioactive, and therefore the recognition of the presence of a small amount of radioactive material in any spring water does not set that water apart from other natural waters.

Knowledge of the presence of radioactive substances in waters is comparatively recent. Therefore, the radioactivity has been seized upon as something to talk about and advertise as a remarkable and unique property of many waters which are no more unique in their radioactivity than they are in their wetness.

Physicians and others who have given thought to the subject have long recognized that, in general, much better results are obtained from the use of mineral waters at their sources than from the use of the same waters after they have been shipped in bottles. The common explanation has been that at resorts more water is taken, and at the same time the diet and other living conditions of the patient are better regulated than at home. Even without special medical attention at the resort, there is usually rest, recreation, and freedom from the normal cares of life.

When radioactivity was first studied and it was found that many famous medicinal waters contained radium emanation, this fact was immediately taken as an explanation of the greater benefits derived from the use of the waters at their sources. The radium emanation is half gone in about 3.8 days after the water has been taken from its source and practically all gone within 30 days. So far, the explanation seems reasonable. The first determinations of radioactivity of natural waters were nearly all made on samples from well-known springs. Later studies brought out great differences in the radioactivity of waters that seemed to produce identical beneficial effects, and also showed radioactivity to be a universal property of natural water. As the use of radium emanation in the treatment of disease was developed, it appeared that the doses necessary to produce detectable effects could not be obtained by drinking any reasonable quantity of one of the naturally radioactive spring waters; of most waters it would be necessary to drink from 100 to 1,000 gallons a day.—*Public Health Reports,* Vol. 41, No. 37.

A Concept of Mental Hygiene.—A study of the problem of immigration in its relation to the conservation of mental health should consider some of the underlying principles of mental hygiene. These include a brief consideration of how man most probably acquired some of his distinguishing characteristics, and the attitude of fellow men toward those who depart from customary standards of thought and conduct. A study of this character should encourage a more scientific orientation toward mental hygiene and a better understanding of the significance of a social behavior generally. There is good cause for believing that individual departures from customary behavior and thought are regarded as contrary to the well-being of the group, which automatically takes action in one form or another to rid itself of the offending member. Such action may vary from the extremes of simple ridicule on the one hand to removal from the group on the other hand. Several reasons exist in support of the belief that man's physical, and particularly his mental, attainments have been the product of social evolution. This hypothesis is based upon a mass of evidence that, on the whole, is difficult to refute.

Darwin thought that evolutionary modifications in man resulted in the development of internal structures, such as the brain and nervous system. He further observed that under the stress of natural selection any direct advantage must have been perfected through community life and that the formation of human nature took place in a somewhat similar manner as the social life of bees evolved in hive life. He also considered that within tribes a high standard of morality was of only slight advantage to the individual man or his children, but that an increase in the number of well-endowed men and a general advance in moral standards rebounded to the advantage of one tribe over another. On the other hand, when discussing the subject of sexual selection, he regarded the evolutionary modifications in man as largely dependent upon individual selections. This was contrary to his already propounded doctrine that man was a product of social evolution.—*U. S. Public Health Service Bulletin,* No. 148.

The Need for Conservation of Vision.—Defective vision and its correction, eye protection and proper illumination are of vital importance in our schools and colleges, in our homes, in industry, and in all walks of life. Our highly organized modern life imposes severe requirements upon our eyes, and the tendency is to demand more and more of this particular organ. A little thought brings us to realize to what an increased extent we are using our eyes under modern conditions, compared with those of a generation or so ago. This is especially true of those living in cities and engaged in vocations common to city life, either industrial, commercial, or professional, as compared to those pursuits in less thickly populated districts, particularly that of agriculture. One properly concludes that in many outdoor vocations there is much less demand of the eyes, but we must realize that the average individual, no matter whether residing in the cities or in the rural districts and irrespective of vocation, does much more reading than was the practice a few years ago.

It was not so long ago that the average rural home could boast of more than a weekly newspaper where today rural delivery brings to them not only the daily newspaper but a large number of periodicals. A wealth of literature is now easily and inexpensively accessible to all. The modern art of illumination contributes greatly to the use of the eye, especially in near work, for there was not the incentive to read by the flickering candle flame or the comparatively weak light of the oil lamp that there is with the improved lighting facilities of such comparative cheapness as found in the average home throughout the land today. It can be stated without fear of contradiction, that in the past fifty years there has been more development in lighting than in all the ages before, since man first picked a brand from the fire to light his way. The great increase in artificial illumination has brought an additional burden which the human eye has not quickly learned to carry, and it is not strange that the imperfections of the refraction of the human eye

should become so apparent and reveal the need for conservation of vision.

It need not be concluded that our eyes are getting alarmingly worse—they probably always have been bad—but we must learn how to use them and not misuse and abuse them. It is a fact that a large majority of the human race have defective vision, most of which is remediable. A lack of knowledge of the prevalence of this condition and a lack of proper eye care are in a large measure responsible for much suffering and inefficiency.

There are millions of school children in our country at a decided disadvantage in their efforts to gain an education because of poor eyesight. A large proportion of school children have eye defects of sufficient degree to warrant correction. More than 60 per cent of all persons gainfully employed in the United States have defective vision, and no physical defect contributes more directly to fatigue and inefficiency than eyestrain, or is more responsible for waste of vitality, effort, time, and material.—*Bulletin 5.* Issued by the Eye-Sight Conservation Council.

INDUSTRIAL MEDICINE

Medical Service Proves its Value to Industrial Plant.—This is the title of a paper by Dr. Emery Hayhurst in the *Nation's Health* for April. In this paper he gives a number of personal observations from his experiences in Ohio, especially referring to a number of cases of carbon-monoxid poisoning and of occupational dermatosis. There is a discussion of ludicrous and menacing "safety devices" designed and used by both employees and employers without special training or knowledge of health or accident hazards. Several suggestive extracts from the paper follow.

Industrial physicians should lay stress on health complaints made by workers, and not wait for sickness disability. Surgery, in the face of disability statistics, certainly requires much less stress than ordinary sickness. A study of the physical status and capabilities of individual workers, and constant plant examinations for health hazards, are the important things. Lay supervision cannot be considered effective in any sense, because of a number of factors which lay persons fail to comprehend, such as peculiarities of age, sex, physical stamina, physical defects, mental attitudes, incipient disease, convalescence from disease, malingering, etc. The medical man should sit in on all questions of heating, lighting, ventilation, the use of poisons, compensation policies, strikes, and in fact, practically all instances of human unproductiveness.

Where medical services cost no more than $2 or $3 per capita per year, the adequacy may be considered a "blind" in most instances; $10 per year is palliative; $25 per year will usually provide a minimum but complete industrial medical service. There is no reason, so far as one can see, why the workers should not be expected to stand a share of this. Price states that "the most dangerously unguarded machinery today is that of factory inspection for health purposes." Under our present system of lay personnel, usually entirely uninformed in matters of technical hygiene, factory inspection can easily be shown to be "dangerous." Worse still, small plants are left practically unsupervised by any kind of sanitary inspection worth the name. I question whether small-plant work should be undertaken by physicians who devote the balance of their time to general practice, except perhaps in a purely advisory capacity. The diversity of experience and the lessened importance of tenure of office with any one small plant may permit a physician to devote full time, safely, to the general subject of small plants. He should organize a group of as many small plants as he and a competent staff can supervise with justice to the situation. The medical work should be done at each plant, not elsewhere, as at a central dispensary. As the health and wellbeing of workers is a production affair vitally related to plant conditions, it should be taken care of as much as possible on the grounds of the plant. Emmons found that it was not well to assemble employees from different plants in a common waiting room. They tend to compare notes, which leads to dissatisfaction.

Beginning with optional or voluntary physical examinations in order to establish confidence, and including the plant officials, one should soon be able to work up a most worth-while service, appreciated by all concerned. The industrial physician should not be hampered by being placed under the legal department, or engineer, or any other technical personnel of the organization than that of the production manager or the president himself. His problems are usually much more intricate than those of the technician, and he needs latitude.

Preventive Medicine in Industry.—The relation of industrial medical practice to public health is increasingly recognized, particularly in those sections of the country where it has been longest established. In some industries the preventive work is the most important service rendered by the medical department. The fact that thousands of man-years are lost each year from disabilities that are largely preventable is just beginning to be appreciated by a few of the more progressive employers of labor. To the great majority, medical work in industry is still limited to the fulfillment of workmen's compensation law requirements. The vastly greater economic loss from illness is totally disregarded. Physicians of experience in industrial work state that at least 50 per cent of the illness from which workers suffer is preventable, and the attack on this problem waits only upon the active interest of the management. As illness and ill health of industrial workers are reflected largely in disturbed home and community conditions, industry should feel obligated to contribute its just share to prevention of illness. For every industrial disability needing surgical attention there are probably ten or more cases needing medical investigation, and of this larger number the treatment is preventive. Hence, medical work in industry should be organized around preventive medical undertakings rather than around surgical and curative measures.—From an editorial in *The Nation's Health,* for April.

Women in Dusty Trades.—When discussing silicosis or other diseases of the lungs due to dust, people usually think of occupations and industries in which men alone are employed. We hear of "stone-cutters' consumption," "miners' phthisis," "steel-grinders' lung," clay-workers' diseases, "potters' rot," and other designations for lung troubles caused by dust, peculiar to each industry. Most of these terms call to mind trades in which women are not usually found, and this leads to the conclusion that no women are exposed to these diseases—especially silicosis.

This conclusion is not warranted by facts. A study of the industries in which silica dust may be found is being conducted by the Bureau of Industrial Hygiene.

The investigation has shown so far that women and children as well as men are directly and indirectly exposed to silica dust by reason of their work.

By indirect exposure is meant the condition of a fac-

tory in which dust fills the atmosphere, or covers the floors and walls of the rooms in which women work, occurring as a result of some of the processes of manufacture, although the women themselves are not actually employed at dusty operations.

In 153 factories comprising over 20 industries in which silica dust in some form is present, 7,680 men and 870 women were found employed. Of the women, about 400 were working at essentially dusty operations —as compared with about 5,000 men. This is direct exposure to the dust hazard. About one half the remainder, or 200, were indirectly affected either by reason of the location of dusty processes in their working places or by the fact that they were obliged to go into or pass through departments in which dusty work is carried on.

Among the industries in which women are employed in dusty processes are pottery, making both china or tableware, and electrical porcelain, the manufacture of mica insulators, sand paper, scouring powders and abrasive soaps or cleansers, and several branches of the glass industry.—Minnie M. McMahan, Inspector, in *Industrial Hygiene Bulletin,* N. Y. Dept. of Labor, April, 1926.

Industrial Irritations of Skin.—Claims for compensation classified under the occupational-disease act, show the greater part of the cases to be lesions of the skin. The literature available to the general practitioners upon the subject of diseases of the skin directly attributable to industry is limited.

"Irritations of the Skin Due to Industrial Causes" by C. Guy Lane, M.D., Asst. Dermatologist, Massachusetts General Hospital, Boston, Mass., in the *Nation's Health,* June, 1925, is a concise article which should be of interest, not only to physicians, but to those interested in the subject of industrial hygiene.

It will have been of benefit in exciting the general practitioners as well as the industrial physician to a closer study of the relations of skin lesions to the worker's occupation, and so focusing thought upon remedial measures.—C. T. G. R. in *Industrial Hygiene Bulletin,* N. Y. Dept. of Labor, April, 1926.

Carbon Monoxid, the Invisible Hazard.—Death or serious injury occurring as a result of a machinery or automobile accident is a hazard the average person readily understands, because it is one that can be visualized, and so the people lend their united effort to the enactment of safety measures and compensation laws.

Death or serious illness resulting from a gas such as carbon monoxid is a hazard that even many professional and technically trained individuals fail to recognize as a serious menace, and thus the general public does not give the hazard the marked attention or support the demand for remedial measures as they would in the case of hazards resulting in bodily injury. Despite the reports of the increasing numbers of deaths from carbon-monoxid gas, and the widespread use of this gas in industrial, commercial, and domestic life, the ultimate effect upon health as a result of this hazard has not been accorded the medical attention that its use warrants.

While the literature on carbon-monoxid poisoning is quite voluminous, discussion of the hazard from an industrial viewpoint is not as complete as would be expected with the recent advances of the study of industrial hygiene and occupational diseases in these United States.

With the constant changes in industrial processes, and the greater use of substances with which there is connected a CO hazard, it is imperative that more research be pursued by governmental agencies possessing regulative powers with reference to health and safety in industry and commerce. The medical profession should be alive to the hazard, and give intensive study to the ultimate effects upon those exposed to the CO hazard.

This is of grave importance in order that educational propaganda as to the danger may be instituted, proper regulative measures be enacted, and compensation provided for those suffering as a result of exposure to the CO hazard.

The same attention should be accorded to, and provisions made for the relief of those exposed to the CO hazard as is now afforded by enactment to the injured.—C. T. Graham-Rogers, M.D., in *Industrial Hygiene Bulletin,* N. Y. Dept. of Labor, May, 1926.

Court of Appeals Decision Without Opinion.—On February 24, 1926, the Court of Appeals handed down a decision without opinion in the case of *Swihuba v. Horowitz,* affirming 215 App. Div. 740.

A chauffeur was delivering barrels of bootleg liquor to his employer's customers. The truck skidded and threw him out, breaking both his legs. He acknowledged that he knew the barrels contained liquor. The Department of Labor awarded compensation to him against his uninsured employer. Upon appeal, the Appellate Division reversed the award, and dismissed his claim "on the ground that it appears by the claimant's testimony that at the time of the accident he was engaged in an illegal employment." It cited as authority *Herbold v. Neff,* 200 App. Div. 244 (*Special Bulletin,* No. 118, page 59). Upon further appeal, the Court of Appeals, without opinion, affirmed the Appellate Division's order.—N. Y. State *Industrial Bulletin,* March, 1926.

Poisoning from Mercury Vapor.—The insidious effects upon himself of mercury vapor, utilized in a period of research experiments extending over twenty years, have been described in a scientific paper by the famous chemist, Professor Alfred Stock, of the Kaiser Wilhelm Institute. Chronic troubles of the nose, throat, and intestines were rendered more aggravating by increasing nervousness, and as time went on his naturally excellent memory and powers of concentration grew weaker and weaker. No course of treatment prescribed by his physicians proved permanently helpful.

Eventually it became evident that collaborators in his own laboratory, as well as colleagues in other places were being affected in the same way. In consequence it was decided to readjust laboratory conditions so that as little free mercury would be exposed to the air as possible. And at the same time a thoroughly efficient ventilating system was installed. In the course of a few months the various ailments fell off gradually, and after a period of years, health in some cases was restored completely when the experimenter refrained from further contacts with the element.

Medical science, according to Professor Stock, is not aware of the danger arising from the inhalation of mercury fumes, the chronic poisoning from which, in his opinion, is quite as fatal as the better-known poisoning from lead.—*Science News,* June 25, 1926.

Recent Decision of Workmen's Compensation Board.—Claimant was employed as a leather blackener. He contracted dermatitis while working with green leather, resulting in total disability. The referee found that the condition was one of sudden development and was attributable to a particular time. Held, that the facts and medical testimony support this finding and this constituted an accident within the meaning of the Act. A-4460 *Snyder v. Susquehanna Collieries Co.* Opinion by Walnut, Chairman, October 28, 1925.—*Labor and Industry* (Pa.), February, 1926.

THE MEDICAL SOCIETY

OF THE STATE OF PENNSYLVANIA

OFFICERS' DEPARTMENT

WALTER F. DONALDSON, M.D.
Secretary
8062 Jenkins Arcade Building
Pittsburgh, Pa.

SESSION NOTES

THE ELABORATE PREPARATIONS made by the Garage Committee of the Philadelphia County Medical Society, for the benefit of visiting members who motored to Philadelphia for the annual session, were a total loss. The prearranged discount at near-by garages was not taken advantage of by any visiting member, and but one visiting member made inquiry at the Registration Desk of the man employed by the Philadelphia committee to give information and issue courtesy cards.

FOURTEEN VISITING MEMBERS took advantage of the opportunity offered through the Philadelphia County Society to play golf. Of this number, twelve expressed a desire to form a golf association for tournament competition on the Monday preceding the opening of the annual sessions. Dr. John W. Croskey, Chairman of the 1926 Golf Committee, believes it will be possible to arrange such a tournament for the 1927 Pittsburgh session.

AFTER THIS YEAR'S EXPERIENCE in attempting to compete with the attractions of the Sesqui-Centennial and the American Legion convention in Philadelphia, it is believed that in the future the Committee on Place of Meeting should not accept invitations to meet in cities planning celebrations likely to prove distracting to visitors whose primary object is to attend scientific meetings.

SECRETARY P. A. NOLL, of the York County Society, discussed the "Economic Aspect of Nurses' Activities in Medical Practice" before the 1926 Conference of Secretaries. Dr. Noll thoroughly proved to the satisfaction of his hearers that a well-activated county medical society can do much to protect public health as well as the business interests of licensed practitioners of medicine. Apparently, in York County the misguided energies of public-health and industrial nurses were turned aside from actual competition with medical practitioners to the channels originally intended for such nursing activities. The York County Medical Society accomplished this improvement by obtaining from the Board of Medical Education and Licensure an opinion regarding the limitations of the services of industrial and public-health nurses, and by forwarding a copy of this opinion, together with a marked copy of Pennsylvania's Medical Practice Act defining the practice of medicine, to the employers of the overly zealous nurses in York County.

FOR MANY YEARS, close observers have expressed the opinion that quite a number of members of the State Society attend the annual session, but do not go through the formality of registering. At the 1926 session, the Philadelphia County Medical Society required their guests at the smoker to register, giving name and county medical society to which they belonged, thus inadvertently providing material for study.

An analysis of the registered attendance at the smoker, in comparison with the registered attendance at our annual meeting, discloses the following facts: The number of members from the State Society registering at the smoker but not registering at the State Society meeting, from the various component county societies is as follows: Allegheny 3, Berks 1, Blair 1, Chester 3, Schuylkill 1, Somerset 1, Washington 1, Philadelphia 69. Of the approximately 600 physicians registering in attendance at the smoker, 11, exclusive of Philadelphia county, did not register at the Society's headquarters in the Bellevue-Stratford Hotel.

Of the 69 members from Philadelphia registering only at the smoker, possibly none attended any of the meetings of the State Society. It is not reasonable, however, to assume that any member from out of town was in Philadelphia only to attend the smoker. Of 300 out-of-town physicians registering at the smoker, less than

4 per cent did not register with the State Society. This percentage, applied to the total out-of-town registration with the State Society, would indicate that about 30 members attended the 1926 session of the State Society without having registered.

BENEVOLENCE FUND

The following replies have been received in response to an insert in the October ATLANTIC MEDICAL JOURNAL, offering to the members of the Society an opportunity to contribute to the Medical Benevolence Fund of the Medical Society of the State of Pennsylvania:

From Lewis H. Taylor, M.D., Wilkes-Barre, $50; from W. J. Armstrong, M.D., Butler, a pledge to pay on January first of each year, for an indefinite period, the sum of $25; from R. C. Kirkwood, M.D., Pittsburgh, Lt. Col. M. R. C., Commanding, 57th Station Hospital, Z. C., a pledge to pay the sum of $25 in five quarterly installments, also a written pledge of a bequest of $250 from Dr. Kirkwood.

Before publishing the above-mentioned bequest, a contribution of $100 had been received from Ira G. Shoemaker, M.D., Reading, and $100 from the Woman's Auxiliary of the Medical Society of the State of Pennsylvania, together with the following letter:

Philadelphia, Oct. 12, 1926.

To the Board of Trustees of the
Medical Society of the State of Pennsylvania.

Gentlemen:

At the beginning of the year just past, you granted to our Auxiliary the sum of One Hundred Dollars ($100) to help us in our organization work. During the year we have established a plan for our finances, and because of the large increase in our membership, find our treasury in good condition. Our Executive Board wished in some way to show our appreciation, and after hearing President Albertson's address this morning and his plea for a better support of your Benevolence Fund, it is our unanimous wish to return to you $100 with the suggestion that it be added to the Benevolence Fund.

Respectfully,
(Signed) BERTHA G. JOHNSTON, *President.*

CHANGES IN MEMBERSHIP OF COUNTY SOCIETIES

The following changes have been reported to October 15:

ALLEGHENY: *New Members*—Walter H. Deer, 2707 Brownsville Road; John D. Garvin, 5004 Jenkins Arcade; Wendell B. Gordon, 121 University Place; M. Weir Kneedler, 429 Penn Ave.; James J. Lee, 5023 Jenkins Arcade; Thomas L. Wilson, 1029 Western Ave., N. S., Pittsburgh. *Reinstated Member*—David M. Dunbar, Buffalo (Wash. Co.). *Removal*—Samuel E. Nowry from Wilmerding to Dover, Del.; Ralph Lynch from Pittsburgh to Greensburg (West. Co.). *Death*—Alfred J. Hopkins, Pittsburgh (Magill Univ., Quebec, '83), Sept. 7, aged 64.

BLAIR: *Reinstated Member*—Byron M. Sell, 616 Fourth St., Altoona.

BERKS: *New Member*—Michael Penta, 304 S. Fifth St., Reading.

BUCKS: *Removal*—Herman C. Grim from Trumbauersville to Sellersville.

BUTLER: *Removal*—Helen J. Cowie from Slippery Rock to Bellevue, Wash.

CAMBRIA: *Removal*—Clyde A. Fitzgerald from South Fork to 5223 Twenty-first Ave., N. E., Seattle, Wash.

DAUPHIN: *Death*—Robert D. Swiler, Harrisburg (Jeff. Med. Coll. '89), Sept. 16, aged 58.

LEBANON: *Death*—John C. Bucher, Lebanon (Univ. of Penna. '84), Sept. 6, aged 63.

LEHIGH: *Removal*—Dwight R. Sipes from Allentown to Everett (Bedford Co.).

LUZERNE: *New Members*—Gerald N. Fluegel, 189 So. Washington St.; William A. Weaver, 114 Academy St., Wilkes-Barre; Philip Hertz, 465 Bennett St., Luzerne; Sherman R. Schooley, Shavertown; John W. Woehrle, 403 George Ave., Parsons; M. G. O'Brien, 340 Main St., Dupont.

NORTHAMPTON: *New Members*—Theodore Reichbaum, 724 Northampton St., Easton; Michael Stolfo, 508 E. Fourth St., Bethlehem. *Removal*—Edwin R. Lewis from Easton to Burbank Hospital, Fitchburg, Mass.

PHILADELPHIA: *New Members*—Frederick R. Robbins, 258 S. 18th St., Philadelphia; Frederick W. Steinbock, Avon-by-the-Sea, N. J. *Reinstated Members*—H. Bailey Chalfont, Dilks Bldg., Pitman, N. J.; Mary M. C. Longdon, Kulpahar Hamirpur Dist., U. P., India; Charles M. Montgomery, St. Joseph's Sanatarium, Asheville, N. C.; Charles E. Price, 316 N. 52d St.; W. J. Winters, 1513 Erie Ave.; Walter M. L. Ziegler, 1418 N. 17th St., Philadelphia. *Removal*—Charles F. Branch from Philadelphia to 80 E. Concord St., Boston, Mass.; James S. Gallagher from Philadelphia to Slippery Rock State Normal School, Slippery Rock; Joseph B. Nylin from Newtown to Univ. of Penna. Hospital, 36th and Spruce Sts., Philadelphia. *Deaths*—H. MacVeagh Brown, Philadelphia (Univ. of Penna. '95), recently, aged 54; William A. Hitschler, Philadelphia (Univ. of Penna. '92), Sept. 1, aged 56; Wilmon W. Leach, Philadelphia (Univ. of Penna. '92), recently, aged 56.

SCHUYLKILL: *New Members*—Henry A. Dirschedl, Pottsville; Thomas D. Maley, Branchdale. *Removal*—Charles H. Knauer from Schuylkill Haven to 30 E. Mahanoy Ave., Mahanoy City.

SNYDER: *Reinstated Members*—A. Jerome Herman, Middleburg; Russell W. Johnston, Selinsgrove.

VENANGO: *New Member*—Benjamin Hooke Anderson, 505 Fifteenth St., Franklin.

WASHINGTON: *Transfer*—Jonathan R. Day, Claysville, formerly of Nineveh, from Greene County Society.

YORK: *Death*—G. Emanuel Spotz, York (Jeff. Med. Coll. '97), Sept. 21, aged 50.

PAYMENT OF PER-CAPITA ASSESSMENT

The following payment of per-capita assessment has been received since September 21. Figures in the first column indicate county society numbers; second column, State Society numbers:

Sept.	21	Venango	53	7511	$2.50
		Northampton	137–138	7512–7513	10.00
	22	Berks	133	7514	2.50
	30	Philadelphia	2076–2083	7515–7522	35.00
Oct.	5	Snyder	7–8	7523–7524	10.00
		Luzerne	279–280	7525–7526	10.00
		Blair	95	7527	5.00
		Schuylkill	143–144	7528–7529	10.00
		Luzerne	275–278	7530–7533	20.00
		Allegheny	1273–1279	7534–7540	17.50

The Woman's Auxiliary of the Medical Society of the State of Pennsylvania

Mrs. Samuel Bolton, *Editor*
4701 Leiper Street, Philadelphia, Pa.

A NOTE FROM THE PRESIDENT

Dear Editor:

Due to the multiplicity of reports and the vacancies yet to be filled, it is impossible for the secretary to have a completed report ready for this issue

However, a full account of the proceedings of the Auxiliary at the State meeting held in Philadelphia will be in shape for the next issue.

Reluctantly I accepted the honor of this office, since the Auxiliary has grown so large (1050 present enrollment), and I know we are going to add to that number this year, making increasing duties.

I ask the support and coöperation of every member, and should suggest that you keep an eye on this column, as it will be the medium of contact in much of our work.

We are looking forward to a year of pleasant friendships and lots of work.

Sincerely yours,
Susan F. B. Hunsberger
(Mrs. J. Newton Hunsberger)
President.

OFFICERS AND COMMITTEE CHAIRMEN

At the recent meeting of the Auxiliary held in connection with the annual session of the Medical Society of the State of Pennsylvania at Philadelphia, the following officers were elected:

President—Mrs. J. Newton Hunsberger, Norristown, Pa.
1st Vice-President—Mrs. C. R. Smith, Uniontown, Pa.
2d Vice-President—Mrs. E. A. Shumway, Philadelphia, Pa.
3d Vice-President—Mrs. M. L. McCandless, Rochester, Pa.
Treasurer—Mrs. F. R. Bausch, Allentown, Pa.
Recording Secretary—Mrs. Myer Solis-Cohen, Philadelphia, Pa.
Corresponding Secretary—Mrs. H. C. Podall, Norristown, Pa.
Parliamentarian—Mrs. William Anderson, Pittsburgh, Pa.
Directors—
(3 years) Mrs. Wm. E. Parke, Philadelphia, Pa.; Mrs. W. J. Walker, Philadelphia, Pa.
(2 years)—Mrs. E. S. Buyers, Norristown, Pa.; Mrs. T. Kenneth Wood, Muncy, Pa.
(1 year)—Mrs. Charles Rebuck, Harrisburg, Pa.; Mrs. James I. Johnston, Pittsburgh, Pa.

Committee Chairmen

Organization—Mrs. W. Wayne Babcock, Rydal, Pa.
Education and Publicity—Mrs. Samuel Bolton, Philadelphia, Pa.
Public Relations—Mrs. John G. Wilson, Norristown, Pa.
Hygeia—Mrs. Howard Mellor, R. D. 6, West Chester, Pa.
Program—Mrs. H. W. Morrow, Pittsburgh, Pa.
Nominating—Mrs. H. C. Frontz, Huntingdon, Pa.

EXTRACTS FROM "THE LIFE OF SIR WILLIAM OSLER"

By Harvey Cushing

'Tis no idle challenge which we physicians throw out to the world when we claim that our mission is of the highest and of the noblest kind, not alone in curing disease but in educating the people in the laws of health, and in preventing the spread of plagues and pestilences; nor can it be gainsaid that of late years our record as a body has been more encouraging in its practical results than those of the other learned professions. Not that we all live up to the highest ideals, far from it—we are only men. But we have ideals, which means much, and they are realizable, which means more. Of course there are Gehazis among us who serve for shekels, whose ears hear only the lowing of the oxen and the jingling of the guineas, but these are exceptions; the rank and file labor earnestly for your good, and self-sacrificing devotion to your interests animates our best work.

A well-trained sensible family doctor is one of the most valuable assets in a community, worth today, as in Homer's time, many another man. To make him efficient is our highest ambition as teachers, to save him from evil should be our constant care as a guild..... Few men live lives of more devoted self-sacrifice than the family physician but he may become so completely absorbed in work that leisure is unknown.....There is danger in this treadmill life lest he lose more than health and time and rest—his intellectual independence. More than most men he feels the tragedy of isolation—that inner isolation so well expressed in Matthew Arnold's line—"We mortal millions live ALONE."

Fortunately the medical profession can never be wholly given over to commercialism, and perhaps this work of which we do so much, and for which we get so little—often not even thanks—is the best leaven against its corroding influence. While doctors continue to practice medicine with their hearts as well as with their heads, so long will there be a heavy balance in their favor in the Bank of Heaven—not a balance against which we can draw for bread and butter, or taxes, or house rent, but without which we should feel poor indeed.

URGE CLUB STUDY IN CHILD DELINQUENCY

It would be well for club women to arrange their programs so that once a month there will be opportunity to consider some form of juvenile delinquency. The following topics could be considered: The sale of firearms to minors, which accounts for the alarming number of shooting cases, in which fourteen- and fifteen-year-olds are the principals; the prevalence of automobile stealing by children; driving by children under age, and its dangers to the community; youthful banditry; and persistent truancy.

County Society Reports

REPORTERS

Adams—James P. Dalbey, M.D., Gettysburg.
Allegheny—Lawrence G. Beinhauer, M.D., Pittsburgh.
Armstrong—Jay B. F. Wyant, M.D., Kittanning.
Beaver—Francis H. McCaskey, M.D., Rochester.
Bedford—Norman A. Timmins, Bedford.
Berks—C. S. Keiser, M.D., Reading.
Blair—Richard S. Magee, M.D., Altoona.
Bradford—Stanley D. Conklin, M.D., Sayre.
Bucks—Anthony F. Myers, M.D., Blooming Glen.
Butler—Ralph W. Walker, M.D., Butler.
Cambria—William B. Templin, M.D., The Rocks.
Carbon—Jacob A. Trexler, M.D., Lehighton.
Center—James L. Seibert, M.D., Bellefonte.
Chester—J. Ashbridge Perkins, M.D., Coatesville.
Clarion—Hilton A. Wick, M.D., New Bethlehem.
Clearfield—George D. Fussell, M.D., Clearfield.
Clinton—William E. Welliver, M.D., Lock Haven.
Columbia—Charles B. Yost, M.D., Bloomsburg.
Crawford—Edgar J. Werle, M.D., Meadville.
Cumberland—Richard R. Spahr, M.D., Mechanicsburg.
Dauphin—Josiah F. Reed, M.D., Harrisburg.
Delaware—George L. Armitage, Jr., M.D., Chester.
Elk—Samuel G. Logan, M.D., Ridgway.
Erie—Anna M. Schrade, M.D., Erie.
Fayette—Harry J. Bell, M.D., Dawson.
Franklin—Ambrose W. Thrush, M.D., Chambersburg.
Greene—Robert W. Norris, M.D., Waynesburg.
Huntingdon—John M. Beck, M.D., Alexandria.
Indiana—Williams A. Simpson, M.D., Indiana.
Jefferson—William A. Hill, M.D., Reynoldsville.
Juniata—Brady F. Long, M.D., Mifflin.
Lackawanna—M. M. Williams, M.D., Scranton.
Lancaster—Roland N. Klemmer, M.D., Lancaster.
Lawrence—William A. Womer, M.D., New Castle.
Lebanon—John D. Boger, M.D., Lebanon.
Lehigh—Harry L. Baker, M.D., Catasauqua.
Luzerne—Lewis T. Buckman, M.D., Wilkes-Barre.
Lycoming—Wesley F. Kunkle, M.D., Williamsport.
McKean—Francis DeCarla, M.D., Bradford.
Mercer—Edith MacBride, M.D., Sharon.
Mifflin—Frederick A. Rupp, M.D., Lewistown.
Monroe—Walter L. Angle, M.D., East Stroudsburg.
Montgomery—John C. Simpson, M.D., Norristown.
Montour—John H. Sandel, M.D., Danville.
Northampton—Arthur B. Hamilton, M.D., Bethlehem.
Northumberland—Charles H. Swenk, M.D., Sunbury.
Perry—A. R. Johnston, M.D., New Bloomfield.
Philadelphia—Franklin M. Crispin, Philadelphia.
Potter—Ross H. Jones, M.D., Coudersport.
Schuylkill—Arthur B. Fleming, M.D., Tamaqua.
Snyder—John O. Wagner, M.D., Beaver Springs.
Somerset—H. Clay McKinley, M.D., Meyersdale.
Sullivan—Philip G. Biddle, M.D., Dushore.
Susquehanna—Dever J. Peck, M.D., Susquehanna.
Tioga—John H. Doane, M.D., Mansfield.
Union—Oliver W. Glover, M.D., Laurelton.
Venango—John F. Davis, M.D., Oil City.
Warren—Michael V. Ball, M.D., Warren.
Washington—Charles C. Cracraft, M.D., Claysville.
Wayne—Alfred H. Catterall, M.D., Hawley.
Westmoreland—Ellsmer Landis Piper, M.D., Export.
Wyoming—Herbert L. McKown, M.D., Tunkhannock.
York—W. Newton Long, M.D., York.

ALLEGHENY—OCTOBER

A varied and timely program was offered at the October meeting of this Society, held on Tuesday, October 19, 1926, with a presentation of the following papers:

Serum Treatment of Scarlet Fever: Dr. Samuel I. Lebeau.—The organism of scarlet fever—the hemolytic streptococcus—is of two types, one which ferments mannite, and the other which does not, but both types are capable of causing the disease. The antitoxin for scarlet fever has been produced in a manner similar to that used for diphtheria antitoxin.

Immunity test. The toxin is standardized so that .01 c.c. represents a skin-test dose. The test dose is injected intracutaneously in the forearm, and a reading is determined at the end of 22 to 24 hours, when an area of redness 1 cm. or more in diameter constitutes a positive reaction. Positive reactions fade rapidly, but usually last 48 to 72 hours. The toxin used for active immunization can be injected subcutaneously at weekly intervals in three to five doses, beginning with 250 to 500 skin-test doses and gradually increasing the amount of toxin at subsequent injections. Immunity appears in a few weeks, and is determined by the intracutaneous test.

Prophylactic treatment. This consists of 5 injections of toxin given at 5 to 7-day intervals, giving: First injection, 500 skin-test doses; second, 1,500 skin-test doses; third, 5,000 skin-test doses; fourth, 5,000 skin-test doses; and fifth, 20,000 skin-test doses. Children under 2 years of age should receive half the usual dose, while those over 2 years receive an adult dose. The prophylactic treatment with scarlet-fever antitoxin should be used under the same circumstances as a single prophylactic dose of diphtheria antitoxin. This produces passive immunity within 24 hours, and protects for 4 to 6 weeks, giving a negative Dick test. This method should be used only in case of exposure.

Curative treatment. An early single large dose of scarlet fever antitoxin is recommended as soon as the diagnosis is made. The dosage varies from 10 to 100 c.c. of concentrated antitoxin. Quick response is given, and the symptoms and rash usually disappear within forty-eight hours.

Prevention and Treatment of Whooping Cough: Dr. Z. R. Scott.—This disease causes the death of 10,000 children each year, and statistics of 24 countries reveal that it causes 1 per cent of all deaths from all causes. The greatest susceptibility is between 6 months and 5 years. The immunity acquired from an attack is lasting and complete. Much laboratory work has been done with the idea of developing a test for making a positive diagnosis before the development of typical signs, but nothing specific has been found.

Quarantine, isolation of clinical and suspected cases, should be a rigid procedure. Vaccine, to be a preventive, must be fresh and given early after exposure in sufficiently large dosage. Bloom recommends three injections on alternate days ranging from ¼ c.c. for children over 2 years. He uses a preparation of 5 billions B. pertussis and 3½ billions B. influenzæ freshly prepared once weekly without preservatives. Less than 1 per cent of those treated by him developed the disease. There is no specific, and numbers of drugs have been advocated. Ether, as recommended, offers 60 per cent of cases obtaining benefits and 40 per cent showing no results. Various types of vaccines have been offered, but none are specific, and freshness of the vaccine appears to be a most important factor.

In summarizing, the following points should be stressed: Seriousness of whooping cough in young infants; importance of early diagnosis; early administration of fresh, potent vaccine to all exposed persons; and isolation, quarantine, and vigorous treatment in active cases, utilizing the modern therapeutic suggestions.

Use of Convalescent Serum in Treatment of Measles: Dr. R. H. Middleton.—When one takes into consideration the seriousness of an epidemic of measles in a ward of infants who are having gastro-intestinal upsets with resulting marasmus, and the possible outcome when 75 per cent of measles deaths occur under two years, one greets the immunization conferred by convalescent serum as a gift of Providence.

The method of prophylaxis used by the author is: About 7 to 10 days after the appearance of the eruption, 50 c.c. of blood is withdrawn from the patient, having made sure that all serologic precautions have

been taken. The blood is centrifuged, chilled, and re-centrifuged for a half-hour. The serum is freed from all blood cells, and placed in an acetone bath at 57° C. for a half-hour. The serum is then divided into 10-c.c. amounts and placed in hermetically sealed tubes. If no serum is to be used within 24 hours, no preservative is used; if held long, a small quantity of tricresol is used. The serum is then injected into the gluteal muscles. No less than 6 c.c. or more than 10 c.c. is advised. This confers an immunity for about eight weeks.

Conclusions: Human convalescent serum can be used instead of convalescent goat serum; a definite immunity can be rendered by human serum; and convalescent serum is a prophylactic, as well as a therapeutic measure.

Historical Notes on Laryngeal Diphtheria: Dr. R. J. *McCready.*—Medical literature presents no subject that shows the advance in treatment of diseases more vividly than that of laryngeal diphtheria. The author related his early experiences, dating back to the early seventies, as a student in the office of his uncle. The treatment in the early epidemics consisted of calomel, then tincture of ferric chlorid with local applications of chlorinated soda and a chlorid room disinfectant. Bichlorid of mercury followed as a popular remedy, and the theory that chlorid or chlorin liberated into the blood caused the therapeutic response was adopted. From the years 1880 to 1890, marked advances were made.

In 1880, Dr. O'Dwyer of New York perfected his instruments, and intubation supplanted tracheotomy as the procedure of choice. Today, intubation is a routine and commonplace procedure.

Only 20 per cent develop laryngeal diphtheria, providing early antitoxin is administered. In 1870, only 10 out of 100 diphtheria patients were saved. Fifty-four years ago laryngeal diphtheria was almost always fatal. The mortality was 90 per cent. With tracheotomy it was 75 per cent, with intubation 70 per cent, whereas today after antitoxin and intubation it is less than 10 per cent. This figure could be lowered providing the existence of bigoted sects could be destroyed, because these people sneer at medical science and even prohibit the use of antitoxin in the treatment of this disease.

L. G. Beinhauer, M.D., Reporter.

CAMBRIA—SEPTEMBER-OCTOBER

The annual picnic of the Society was held at O-Ke-We-Lah Grove, near Johnstown, on September 9, 1926. It was an all-day affair, and attended by seventy-nine members and twenty-six visitors. No scientific discussions were permitted.

The October meeting convened at the Cambria Hospital October 7th. This was the second annual intercounty meeting. In the afternoon, Drs. John B. Deaver and David Riesman, of Philadelphia, held a surgical and medical clinic. Following the clinic, a dinner and entertainment was held at the Sunnehanna Country Club.

W. B. Templin, M.D., Reporter.

ELK—OCTOBER

The Society met on the 21st at Ridgway. Through the coöperation of the Pennsylvania Tuberculosis Society, Dr. W. P. Brown gave a very interesting and instructive talk on the "Early Diagnosis of Slight Pulmonary Tuberculosis." Dr. Brown then gave a demonstration of the usual office procedure to be employed in eliciting physical signs.

Dr. Hall gave a short history of a case, and the reporter showed films taken at seven-months' intervals. There was considerable discussion, and the data all checked up pretty well.

Professor Sweeney, Superintendent of Schools, next made a plea for the more hearty coöperation of the physicians in the work the Red Cross is doing; in which we most heartily concur. If the Red Cross has been peddling milk carelessly or indiscriminately, we think it is much better to control that by being on the inside and seeing that it is done right, than to stand on the outside and knock.

The reporter had time to bring only one message from the State Society meeting, and that was to the effect that if the physicians did not jump in and retake their rightful places in the various communities, state nurses, insurance nurses, and the various cults and paths would take their jobs away from them.

S. G. Logan, M.D., Reporter.

ERIE—SEPTEMBER

The Society held a "Clinic Day" on September 22d, and invited some of the neighboring counties to attend. Clinics, both medical and surgical, but mostly surgical, were held in both hospitals. Luncheon was served at the Josephinum.

Anna M. Schrade, M.D., Reporter.

FRANKLIN—OCTOBER

The regular meeting on October 19th was held at the South Mountain Sanatorium, Mont Alto. Dr. R. H. McCutcheon, Superintendent of the Sanatorium, and his corps of assistants were the hosts. Twenty-nine members were present, and following a delightful dinner, the Society was called to order by the president, Dr. B. F. Myers.

Routine business was transacted and reports heard from various meetings lately held—the Sixth Censorial, the Fourth Councilor, the Cumberland Valley Medical Association, and the State Society.

Heliotherapy: Dr. Charles C. Custer, Chief Medical Director at the South Mountain Sanatorium.—As applied to the treatment of tuberculosis in the sanatorium at Mont Alto, heliotherapy consists of the exposure of the patient to the direct rays of the sun, and in the use of the ultraviolet rays as produced by the mercury quartz light. It has been used in the State sanatoria at Mont Alto and Cresson since 1921; but in the last three years much more extensively, during which time more accurate records have been kept. One hundred or more cases have been treated annually for the past three years.

This form of treatment is not applicable to all cases. Active progressive cases, high fever, and rapid pulse are contraindications. Other contraindications are hyperthyroidism and obesity, particularly when present in patients with valvular heart disease. The type of patients usually selected for treatment at Mont Alto are those with a low grade of activity, with no or mild symptoms of toxemia, and those who have not responded favorably to routine treatment after two to four months' stay in the sanatorium.

The sun's rays must strike the body direct and not pass through glass, clothing, etc. The exposure must be gradual and progressive, beginning with five minutes' exposure of the feet, and extending to other parts of the body until all parts are reached except the head, for a period of sixty minutes or more both front and back. Irradiations should not be made for a half hour before or two hours after meals, and baths should not be taken immediately before or after irradiations. During hot summer months, exposures should be made

in the forenoon, when the sun's rays are not so intense and the air is not superheated. This prevents general depression and exhaustion.

In heliotherapy one should endeavor to secure a good tanning, thus converting a light reflecting surface into a dark, light-absorbing one. It has been found that the patients who tan well react more favorably to heliotherapy.

Mont Alto has special pavilions for heliotherapy treatment, but any suitable balcony or porch where one has free access to direct sun rays and protection from wind may be used just as well.

Some of the general effects of the sun and ultraviolet-ray therapy are: The skin becomes more healthy and more resistant to infection, the muscles become hard and firm, patients are less susceptible to colds and other respiratory infections, metabolism is improved, the blood picture is improved, as shown by an increase in red blood cells and hemoglobin, while the leukocytes are decreased and the lymphocytes increased.

Some of the direct results in tuberculosis are usually disappearance of pain, night sweats, chills, etc.; decrease in temperature and pulse rate, cough and expectoration; improvement of appetite, sleep, weight, and strength; decrease of physical signs, especially râles; absorption of effusions; and gradual reduction in size of enlarged glands.

As a means of attaining the proper state of resistance against future clinical tuberculosis in malnourished, rachitic, and scrofulous children, the sun and air baths in conjunction with regulated exercises are most effective remedies.

The results obtained in controlling the symptoms of tuberculous enteritis by heliotherapy have been most remarkable. Our results in treatment of tuberculous laryngitis by means of reflected sunlight have also been very encouraging, as well as in the treatment of many of the other complications.

Conclusions: Heliotherapy is a most valuable remedy in a large number of properly selected cases. It should be prescribed and supervised by the physician only. It is a dangerous remedy if used injudiciously. Hemoptysis is no contraindication to its use. Extrapulmonary lesions practically always react favorably to heliotherapy. Artificial light is inferior to the sun's rays, and at best only a poor substitute for the sun, except in enteritis, where we have found the mercury quartz light applied locally over the abdomen is also a most efficient means of treatment.

Dr. Custer completed his paper by reading a tabulated report of the complete results in more than two hundred strictly pulmonary cases treated by heliotherapy at Mont Alto during the summers of 1924 and 1925.

Juvenile Tuberculosis: Dr. R. H. McCutcheon, Superintendent of the South Mountain Sanatorium.—Tuberculosis of the tracheobronchial and hilum glands, or juvenile tuberculosis, was discussed in relation to age, from birth to the fifth year, and from the fifth to the eighteenth years. The infantile or preschool types of tuberculosis were shown to be very rapid in development, with little tendency to healing, fibrosis, or cavity formation, and with a widely disseminated infiltration of the lungs or lymphatic structures.

After the fifth year of life children show a tendency to heal in ratio to the age of the child. The principal reasons for the difference in the type of tuberculosis in these age groups and the high mortality rate in the infantile type are that in infancy, home infection as a rule is received in massive and repeated doses of tubercle bacilli by the infant, who has not developed any resistance or immunity to the infection; whereas the child of school age has escaped the massive home infection, but received infection from street or contact in smaller doses after some resistance has been built up.

The diagnosis of hilum tuberculosis was then taken up briefly as to history, symptoms, physical findings, x-ray, and tuberculin tests. Emphasis was placed on the point that no diagnosis of hilum tuberculosis should be made unless the tuberculin test, preferably an intradermal test, was positive, with symptoms present such as are usually found in severe malnutrition, and an x-ray picture showing unquestionable evidence of calcification of the glands in the hilum area, with possible extension into the parenchyma.

The importance of preventorium care in malnutrition was stressed as the best means of preventing or curing masked or juvenile tuberculosis, together with the separation of the infant from the tuberculous parent at the earliest possible age.

A. W. THRUSH, M.D., Reporter.

LUZERNE—SEPTEMBER

The meeting of September 10th was held in the Society building, with President Mayock in the Chair. Dr. W. A. Weaver of Wilkes-Barre, Dr. J. W. Woehrle, of Parsons, Dr. P. E. Hertz, of Luzerne, and Dr. S. R. Schooley, of Shavertown, were elected to membership. The essayist was Dr. Charles Francis Long of Philadelphia, who read a paper entitled "The Early Diagnosis of Pregnancy by Methods of Precision."

Dr. Long: Any test for pregnancy must fulfill certain criteria: it must be founded on some observed function of either mother or fetus, it must be available early in pregnancy, and nonpregnant women must not give positive tests. It has been proved that there is no specific protein nor any specific viscosity change in the blood of the pregnant woman. Hence the Abderhalden test and the red-cell sedimentation test of Fahræus are fallacious in that they are not based on any observed function of mother or fetus.

There is a spontaneous glycosuria without hyperglycemia in pregnancy, occurring in a small percentage of cases. In 1895 Lanz, and in 1899 Hofbauer, discovered that glycosuria is a symptom of pregnancy which disappears when the physiologic relationship between the fetus and maternal parts is destroyed. In 1916, Ryser determined that pregnant women may be fed different sugars without resultant hyperglycemia. In 1919 Gruenthal showed that glycosuria occurred in pregnant women when fed amounts of sugar such as were fed the nonpregnant. In 1920, Frank and Nothmann used induced glycosuria as a sign of early pregnancy, feeding 100 grams of glucose on a fasting stomach, showing that the bloodsugar never changed but that glycosuria appeared within one hour in pregnant women.

The Roubitschek adrenalin test and the phlorizin test were subsequently advanced as improvements on this technic, the adrenalin and the phlorizin being used to stimulate the excretion of sugar, but the results were uncertain, and the tests have been abandoned.

We have modified the Frank and Nothmann technic, and report a series of 189 cases carefully followed. We allow an average supper, and examine the first morning specimen of urine for sugar. This must be sugar free. We omit breakfast and give table sugar, 7.5 grams per 10 pounds of body weight, but never more than 50 grams, dissolved in two tumblers of water flavored with the juice of half a lemon each. We examine the urine at the end of one hour and at the end

of two hours. If either specimen gives a positive reaction such as would be termed "positive for sugar" in a routine urinalysis, the test is considered positive, and, in conjunction with the clinical findings, strengthens the probability of pregnancy. In a series of 189 cases, 110 were pregnant and 79 were not. Of the pregnant group, 105 (95 per cent) reacted positively. There was 6 per cent of error in nonpregnant women. This percentage of error is smaller than that found with any other laboratory method for early diagnosis of pregnancy, and compares favorably with such procedures as the Wassermann test in its factor of error.

Dr. Meyers: I am hoping that the method outlined in proving or disproving pregnancy will become universal enough that the medical profession will be able to answer correctly the woman who comes in anguish. I cannot make a diagnosis of pregnancy satisfactory to myself under two or three months. We should become acquainted with the method. The test is simple, and a man doing obstetrics should become acquainted with it.

Dr. Janjigian: Such tests usually run about 25 years ahead of the rest of the practice. Dr. Long's test is very practical and very simple, and available to all men practicing medicine.

Dr. Kocyan: My own series of sugar tests is not large (30 cases), and I cannot report such a high percentage of success. My own would be 85 per cent. When the test first came out, I used glucose. The phlorizin test has not been satisfactory in my hands. There is a uniform level of carbohydrate metabolism for all pregnant women, and it is rather a hypoglycemia, so that any increase in the normal intake leads to an overflow. The pregnant woman does not seem to tolerate any higher level than the normal.

Dr. Daly: In 1913 when Abderhalden brought out his test, it was my privilege to bleed all the pregnant women at the Philadelphia General Hospital and Jefferson Hospital. Positives ran between 70 and 80 per cent, but we also had positives in carcinoma and sarcoma. The modification of this, the Frank and Nothmann test, runs higher, about 89 per cent. Dr. Long's test is more accurate than any other test at the present time.

Dr. Long: I have a fight with the people who put "Maturin" on the market and who feel it is the last word in diagnosis and quote without authority from the paper by Hirst and myself.

I had expected to be asked about a control series of men. The reason I cited men in the phlorizin discussion was to show that evidently there are too many factors in that technic which could not be controlled. We did a small series of men, all negative, but discontinued because we realized that glycosuria *without hyperglycemia* is impossible in men unless they have that very puzzling condition known as renal glycosuria. We also realized that whenever any physician runs a glucose tolerance test on a man, he is running a control for us. Besides we have the above-mentioned work of Folin and Berglund to the effect that a normal individual can handle practically twice the dosage we give, without glycosuria.

After a short time in this work I began to have a conviction that has become stronger with increasing experience, that diabetic acidosis and the vomiting of pregnancy have the same foundation—inability to utilize carbohydrate metabolites. In diabetes the sugar is present, but the pancreas deficient. In the vomiting of pregnancy the pancreas functions but the kidney spills sugar even with a blood sugar value of 79 mgs. per cent. It is my conviction that women in the early weeks of pregnancy are absolutely intolerant of sugar, for I have seen glycosuria following a baked apple which certainly contains less than the usual sugar dose.

Consequently, those who use insulin and glucose to combat this condition would seem to me to be on the right track. Using insulin alone would only aggravate matters, but adding glucose mechanically to the already low blood sugar gives the insulin something to work on, and establishes the normal chain of carbohydrate metabolism.

Lewis T. Buckman, M.D., Reporter.

PHILADELPHIA

September 22, 1926

The president, Dr. Moses Behrend in the chair.

Dr. Carey J. Vaux, Director of Public Health, Pittsburgh: Pneumonia Quarantine.—The control of pneumonia in the United States is a major public-health problem. Lack of a background of preventive work and diversities of opinion of qualified practitioners make this difficult. Pneumonia must be considered broadly, including all pneumonites, regardless of anatomic subdivisions, or whether primary, secondary, or terminal. It is not a specific disease such as measles or typhoid, but a group of closely related diseases caused by any of a number of organisms. In the United States it is first among acute communicable diseases which cause death, and fifty per cent more cases occur in cities than in rural districts.

Victor C. Vaughn recently stated that pneumonia is an infectious disease disseminated by spitting, sneezing, and coughing, and Rosenau believes it to be a communicable disease which should be classified with the infectious fevers. Truly has pneumonia been called "Captain of the Men of Death." Little has been done by public-health work along the lines of prevention, and the percentage of mortality is the same today as it was many years ago.

Lobar or bronchial, primary or secondary, and whatever the organism, the infection may be transmitted to a second individual. Hence isolation of the patient and a modified quarantine would seem warranted. In April, 1924, such a quarantine was inaugurated in Pittsburgh for three reasons: (1) Because the pneumonia death rate was the highest in the United States (three times the rate for the country) and had been increasing from 1913 to 1923. (2) Because it seemed logical to believe that since pneumonia is infectious, isolation and quarantine should decrease the morbidity and mortality. (3) Because the plan was heartily endorsed by the Pittsburgh medical societies.

The regulations covering the reporting of cases were made all-inclusive, to cover all forms, as follows: (1) lobar, (2) bronchial, (3) complicating influenza, (4) complicating other communicable diseases, (5) other pneumonias—traumatic, senile, etc. A modified quarantine is established in all cases except those of group five, when it is at the discretion of the Board of Health. No restrictions are laid on members of the household if the patient is isolated, but no visitors are allowed. The quarantine remains until recovery or death, and is terminated by sanitary cleansing of the house. There are no funeral restrictions. No steps have been taken as yet to eliminate pneumonia carriers.

The results have been very satisfying, since the first step in the progress of pneumonia control has been accomplished, interest has been aroused among both the profession and laity, and a study of the factors in the epidemiology of pneumonia has been made possible by

registration of the number, time, and location of cases. This study has two sides—a medical and an engineering aspect. As an example of the medical problem may be cited the relationship between the common cold, grip, and pneumonia; of the engineering problem, the investigation of the importance of air pollution.

Following is the statistical summary after three years of quarantine:

1923 (no quarantine), 2,295 deaths—371 per 100,000 population.

1924 (9 months quarantine), 2,074 deaths—331 per 100,000 population.

1925 (full quarantine), 1,688 deaths—264 per 100,000 population.

In eleven cities with a population of over 300,000 in 1925, there was a decrease in the pneumonia death rate in seven. In Pittsburgh it was 18 per cent; in Washington (also with quarantine regulations) 20 per cent. In the period from January 1st to September 1st in Pittsburgh in 1923 there were 1,707 deaths; in 1924, 1,576; in 1925, 1,250; and in 1926, 966. This reduction may be attributed, in part at least, to the quarantine, and the experience of the first twenty-nine months has been very encouraging. The public and the medical profession have been kept well informed on the subject, and there have been no objections raised. It is hoped that this winter a complete scientific study of the problem can be made.

Dr. David Riesman, Chairman of the Pneumonia Commission of Philadelphia.—In the past, pneumonia has been attacked as an individual problem, with a search for a medicinal specific, vaccines, sera, etc., but in spite of all efforts, the disease remains as devastating as heretofore. The reasons which have deterred physicians from believing it is a disease that could be affected by quarantine are three: (1) The characteristic chill suggested an autogenous infection, but a carefully taken history usually reveals a slight preliminary cold. (2) The rarity of contact infections, though the denser the population, the higher the rate. (3) The prevailing belief that the pneumococcus is a constant inhabitant of the human mouth, although bacteriologists do not agree on the difference in virulence. The pneumococcus is fairly resistant, remaining virulent when dried on the clothing for fifty-five days. It may be spread by animals and in milk, and a simple bronchitis may transmit it. Hence, attention must be paid to Dr. Vaux's quarantine, especially in view of the good reports from Washington and Pittsburgh. The Philadelphia Pneumonia Commission is eager to have quarantine considered. There must be a study of the predisposing constitutional factors, and the importance of dust, both as a mechanical irritant and as an obstruction to the bactericidal ultraviolet rays, must be ascertained. The Pittsburgh endeavor is excellent, and is especially valuable in creating widespread interest.

Dr. Joseph C. Doane, Philadelphia.—During the past decade the effort made by the laboratory in curative study has exceeded that of the public-health officer. The life-saving power of quarantine is still to be decided. Convalescents, ten or eleven per cent of whom carry virulent organisms, and carriers should be considered.

As to the hospital side of pneumonia quarantine, the Chicago commission favors hospitalization of transportable cases. In the hospital there is definite isolation, with no visitors, separate wards, aseptic technic, and isolation until cases are bacteriologically well. Coryza patients should be excluded from the operating room. Christian, on the other hand, disbelieves in all restrictions except a ten-foot distance from other patients and no operations during colds.

Of ten prominent visiting physicians canvassed on quarantine, six favored it and four did not. Seven hospital administrators were unanimous in favoring it. The transmissibility of pneumonia in the hospital among the sick is very questionable, and Christian avers, after twenty-five years of experience in the Boston City Hospital, that he has never seen a case transmitted from bed to bed. At the Philadelphia General Hospital, during twelve years, not a case has developed among the 1 500 nurses and 250 interns who have served in the pneumonia wards. On the practical side, a small hospital cannot afford an isolation ward which is idle many months of the year, the extra nursing required for one case amounting to about $125 per week. The objection has been raised to the cubicle that it obstructs the circulation of air. In the larger hospitals, isolation is advisable, and makes care and observation easier.

Dr. Wilmer Krusen, Director of Public Health of Philadelphia.—The health officer is in a difficult position indeed when experts differ. Statistics may be misleading, in view of the variability of incidence with different years. Under the State law, pneumonia is now reportable. Will the experts next urge quarantine? Since in 1925 Philadelphia had a lower death rate from pneumonia than Pittsburgh where there was quarantine, may it not be possible that the physicians here are establishing voluntarily a practical quarantine? If a modified quarantine will improve conditions, with legislation rather than education, then it must be established, but sentiment and the medical profession must be back of the health officer.

Dr. Bergey commended Dr. Vaux for his courage in instituting quarantine in Pittsburgh, and since, from laboratory study, it has been proved that the disease is transmissible, quarantine is the only logical method.

Dr. R. C. Rosenberger said that just as voluntary vaccination will never stamp out smallpox, voluntary quarantine cannot hope to achieve the same results as compulsory quarantine. Preventive medicine demands that dissemination be lessened.

An instance was cited of an outbreak of pneumonia in the Army in 1917 that was checked in 15 to 20 days by immediate absolute quarantine.

Dr. A. C. Morgan spoke in favor of moral quarantine. The physician should recognize the contagiousness of pneumonia, and he feels sure that proper instruction in the home will result in the prevention of contacts, as at the Philadelphia General Hospital. Since coryza is so common an antecedent, perhaps a factor in the development of pneumonia is exposure during the convalescent stage. Placarding of houses could hardly be accomplished while opinion among the profession is still so diverse. Through education of physicians and nurses there will come a moral force which eventually will bring a modified quarantine.

Dr. Currie feels sure that if the Pneumonia Commission urges the Board of Health to legalize quarantine, the rank and file of the profession will fall in line.

The question was raised that, since 21 per cent of pneumonias occur in children under one year, 34 per cent under five years, and 6 per cent more occur in those over seventy years, room quarantine possibly is all that is needed. If the cold is the infectious stage of the disease, is there not more danger of infection before the quarantine is in effect, as in measles?

Dr. Paul Cassidy suggested that the pneumonias in infants arose as a complication of measles or whooping cough.

Dr. Vaux, in closing.—A study was made of pneumonia deaths according to age groups, and in the quarantine most stress is laid upon cases from 20 to 50 years. In the senile group the quarantine is optional with the Board of Health. That group of diseases which is reportable but not quarantinable is but seldom reported. Since pathogenic organisms are still present in a virulent form during the disease, it is not too late to quarantine, as was suggested. I should not quarantine measles, chickenpox, or mumps. If the right to isolate is a moral one, why should it not be legal also? Direct contact is responsible for the most harm, and handshaking and kissing frequently transmit common colds. Possibly the solution of the high death rate in Pittsburgh lies in air pollution. In hospital care of patients, clean hands are most important. In a study of four years in Pittsburgh, it was found that 50 per cent of physicians' deaths were from pneumonia. Where there are multiple deaths in one house, a survey is made.

October 27, 1926

The president, Dr. Moses Behrend, in the chair.

Dr. Robert Hurtin Halsey, New York City (by invitation): The Classification and Management of Children of School Age Having Heart Disease.—In the management of any case we must know what the individual can do. On what, then, should the classification depend, and to whom should it apply? In considering the children of the public schools who have heart disease, a large group, the most important determination is the functional efficiency. The classification must, therefore, depend on the determination of the limitations of the individual with cardiac damage.

Patients fall into three classes: (1) the rheumatic group—those who have had an acute infectious disease with resultant damage to valves and muscle; (2) the syphilitic group—rare among school children and not a fixed condition; (3) acute or subacute bacterial cases, too active to be classified functionally. The condition must be stationary for classification, and since the infection may persist without symptoms, this stage is hard to determine. Temperature should be taken several times a day, preferably by rectum, and a white blood count varying from 12,000 to normal over a period of weeks will hint at latent infection. Every case of rheumatic heart disease should be followed up for months, and subsequent infections must be watched for a recrudescence.

The classification of chronic valvular heart disease, inactive, rheumatic, will be an aid in giving rational advice to the patient, and will form a basis for broad study by laying down definite and impersonal terms. In order to make the classification, five things are needed: (1) a watch, since there is a time factor in determining all work; (2) a stair of thirty-foot rise, which the patient must climb in forty seconds; (3) dumb-bells of sufficient weight (not less than four pounds); (4) a thermometer; (5) a spirometer to gauge the vital capacity.

Cases classified by functional capacity fall into five main groups: (1) able to do ordinary physical activity without discomfort but with excessive strain restricted; (2-a) with physical activity slightly limited; (2-b) with physical activity greatly limited; (3) with symptoms or signs of heart failure when at rest and these cases are practically never tested; (4) those with possible heart disease, that is, with abnormal signs or symptoms probably not due to heart disease; (5) without circulatory disease, but with history or actual presence of an etiologic factor—potential heart disease. Class 1 shows a vital capacity above 90 per cent, with normal reaction of respiration, pulse, and pressure curve (to R-2 P-4 in two minutes). If cases show a vital capacity of from 75 to 90 per cent with rate becoming normal in three minutes, they fall into 2-a; with lower vital capacity and a return to normal in from four to seven minutes, into 2-b. Class 2-a can be self-supporting if placed in suitable work, but class 2-b must be given a sedentary job. When an employer is told the condition, a suitable place can often be found. In children, we can determine what education, what games, what preparation for a vocation should be given.

Preventive measures cannot be too strongly stressed—protection from dampness, proper clothing, the removal of focal infections. All children with heart disease should have the tonsils removed regardless of the condition of the throat, for a history in 80 per cent of previous infection suggests likelihood of forgotten attacks in the remainder. Teeth, paranasal sinuses, and any other focus, must be thoroughly dealt with. Rheumatic cases require prolonged care. All children with heart damage should be classified, and they should be made to understand their limitations, not as a specter of gloom, but rather as a handicap. The child will then be most productive physically and mentally, and will live so far as possible a normal, happy life.

Dr. W. D. Stroud: Four Years' Experience in the Convalescent Care of 200 Children with Suspected Organic Heart Disease.—The object of the work at Wynnefield, the country branch of the Children's Hospital of Philadelphia, is an attempt to bring children with active infection to a condition for classification. The active cases, if classified at all, must be placed in class three, and are further subdivided into two groups: (1) those able to move out of the class; (2) those with ultimate circulatory failure and evidence of congestive heart failure. The work is carried on by the Philadelphia Heart Association, financed by the Welfare Federation. The idea of convalescent care for the child with active heart disease began in Brookline, Mass., in 1913, and similar institutions have been founded in New York, St. Louis, and England, necessitated by the apparent failure of the general practitioner to realize that after the exudative stage, with joint involvement, comes the proliferative stage, when Aschoff bodies are formed in the heart muscle. It is hard to determine when this is over. Children are removed from the hospital when good nursing and but one visit from the doctor a week will suffice, when they are well enough to leave the hospital but not well enough to return to school.

The care is based on the same principle as the post-active treatment of tuberculosis, gradually increasing the effort over a period of from six months to two years. It is hard to persuade the parents to rest an apparently well child. There is a great need for such institutions, since it has been necessary to turn away more than seven hundred in four years. In England the incidence of heart disease in children has been found greater than that of tuberculosis. The home cares for from twenty-one to thirty children at a time, with temperature, pulse, and respiration taken four times a day, leukocyte count every two weeks, and weight once a week.

Requirements for admission into the Children's Heart Hospital were originally as follows: (1) a damaged heart, actual or suspected; (2) over 2 years, girls under 13, boys under 12; (3) they must have been in a hospital ward at least two weeks, and the parents told they must remain at the home at least four weeks; (4) all foci to have been completely removed; (5) none admitted with congestive heart failure or critically ill;

(6) a complete social and medical history to be sent with the child. Such convalescent care has been found to improve the child's morale, and after his return home, to improve the hygiene there.

Satisfactory results were obtained in 50 per cent, but of the 200, 78 cannot now be traced. The follow-up must be made vital. After children are sent home, a routine is prescribed for at least three months—breakfast in bed, remaining there for a half-hour thereafter; rest one hour before and a half-hour after lunch; rest two hours in the afternoon; in bed by eight o'clock; and continued under the observation of the family physician or the heart clinic. The family physician must aid in stressing the importance of convalescent care.

Discussion was opened by Dr. Edward Weiss, who said that in addition to a classification of these cases by structure and function, they must be classified also by etiology. Knowing the pathology produced by the rheumatic poison (fibrinous pericarditis, Aschoff's bodies, necrosis of muscle fibers, warty vegetations on aortic and mitral valves, roughening of the posterior auricular walls, and changes in the great vessels), the necessity for prolonged after treatment is evident. These patients are especially susceptible to secondary disease. He would classify cases etiologically, as follows: (1) rheumatic (rheumatic fever, chorea, tonsillitis), (2) syphilitic, (3) bacterial (acute fulminating, subacute, indefinite), (4) atherosclerotic, (5) congenital (many of whom, though susceptible to bacterial invasion, may live long and should not be made cardiac neurotics), (6) traumatic.

Dr. C. C. Wolford commended Dr. Halsey for his classification, which is now the one used by all heart societies. He believes that the use of "organic" in designating certain cases is wrong, since all heart disease is organic. The child who has had acute rheumatic fever can never be regarded as cured, for he is liable to recurrent attacks, and probably the heart is permanently damaged. While the site of this apparently latent focus is undetermined, he would consult a laryngologist before removal of tonsils in doubtful cases. The history of joint involvement or chorea is the most helpful factor in diagnosing acute rheumatic fever. Systolic murmurs alone mean nothing, but coupled with a rheumatic history, they may mean much.

Dr. S. Calvin Smith praised Dr. Halsey's classification.

Dr. Cahan believes that the more serious cases of congenital heart disease should be warned.

Dr. Loeb asked how to regulate the climb of thirty feet in forty seconds.

Dr. Wolffe urged a more concrete record, with functional tests, x-ray, electrocardiogram, and vital capacity, and a more accurate record of improvement.

Dr. Talley lauded the convalescent home for four things: (1) it helps the child; (2) it helps the doctor, because results are demonstrated and thus the community realizes that prolonged care has no ulterior motive; (3) it is good for hospital trustees to see that a convalescent home costs only half as much as a hospital; (4) it is economically unsound to let the child break down later for lack of six months' care.

Dr. Rosenberger asked Dr. Stroud if postmortems were obtained, and what he meant by "congestive heart case."

Dr. Halsey stated that of 1,067 cases treated in a convalescent home in New York, 47 per cent are unfound today, and 27 per cent of those followed have died. It is very easy to time the climb after one has done it several times.

Dr. Stroud said that cases were termed "congestive heart failure" when there were pulmonary signs—râles at the base, engorged liver, and edema. Autopsies were performed on eleven of the patients who died at Wynnefield.

MARY A. HIPPLE, M.D., Reporter.

WARREN—SEPTEMBER-OCTOBER

The regular meeting of the Society was held at the General Hospital in Warren on September 20th, with an attendance of 24.

Dr. W. P. Brown, Medical Secretary of the Pennsylvania Tuberculosis Society, addressed the meeting, and in a very practical way outlined the chief symptoms in the diagnosis of pulmonary tuberculosis, and briefly explained the home treatment of cases. Rest alone will do much to reduce the fever, control the cough, and increase weight. Exercise, fresh air, and proper food have their value, but rest in bed is most essential. The cough may require opiates, and they should not be withheld. Isolation is important to protect the other members of the family and the community. Sanatorium care is to be preferred wherever possible.

Tuberculosis is curable in any climate, and the speaker believes it can be cured. If a Trudeau can live a useful life for forty years after the disease has been diagnosed, why not others. The mortality from tuberculosis has fallen from 350 per 100 000 in Pennsylvania to 78, yet the pulmonary form of the disease still remains one of the chief causes of death in adults between the ages of 18 and 50—the age of greatest economic worth. Every case prevented or cured is, therefore, of considerable value to the state and nation. Public-health nursing is a great adjunct in the management of the home case.

After the meeting, dinner was served at the Hospital.

The October meeting was held at the Conewango Club on the 25th, with 22 members present. Dr. R. B. Mervine reported on 693 labor cases attended by him in the past fifteen years—mostly in rural practice, and at the homes of the patients. Of this number there were 12 postoccipital, 5 face, and 17 breech presentations, 39 with occiput locked under the brim, 2 arm presentations, 1 transverse presentation, 27 instrumental deliveries, 2 cases of eclampsia, and 2 deaths. Among the infants there were 2 with cleft palates, 1 anencephalous, and 1 with meningocele. Version was performed 9 times.

The discussion which followed showed that infection is not a common occurrence in rural practice, and that convalescence usually is very rapid.

Seven of our members attended the State Society meeting, and reported on the papers and clinics which interested them.

Dinner was served following the meeting.

M. V. BALL, M.D., Reporter.

HEALTH TOPICS SUGGESTED FOR COUNTY SOCIETY PROGRAMS

Progress of Goiter Prevention; Use and Value of Vital Statistics in Public-Health Education; Duties of Local Health Officers in Reporting of Occupational Diseases; Relation of Medical Profession to Public Health; Milk Sanitation; Symposium on Milk-Borne Epidemics; Advancement in Scarlet-Fever Prophylaxis and Treatment; Status of Diphtheria Control; Financial and Business Side of Public-Health Administration; Newspapers' Viewpoint of Public-Health Publicity; Medical Supervision of the Public Schools.

OFFICIAL TRANSACTIONS

THE MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA

Minutes and Proceedings of the Seventy-sixth Annual Session, held at Philadelphia October 11, 12, 13 and 14, 1926

MINUTES OF THE HOUSE OF DELEGATES

Monday afternoon, October 11, 1926

The first meeting of the House of Delegates was called to order in the Junior Room of the Bellevue-Stratford Hotel, Philadelphia, Pa., on Monday, October 11, 1926, at 3:15 p. m. by the president, Dr. Ira G. Shoemaker, of Reading.

DR. SHOEMAKER: The meeting of the House of Delegates will please come to order. We shall first have the report from the chairman of the Credentials Committee.

Dr. Edith MacBride reported that 75 delegates had registered. The chairman announced that a quorum was present and that the House was duly constituted for the transaction of business.

THE PRESIDENT: The next order of business is the reading of the minutes.

Dr. William H. Mayer, Pittsburgh, moved that the minutes as published in the November, 1925, issue of the JOURNAL be approved without reading. Seconded by Dr. Hunsberger, Norristown, and carried.

THE PRESIDENT: Next in order is a report from the president of the Society.

Two years ago, when you elected me to this office, I remarked that I did not know whether to thank or censure you, but would reserve my decision until this time. I wish now to thank you for the great honor, and assure you it has been a pleasure to serve you. For the meager service rendered I hope the results attained will be of immeasurable benefit to the medical profession of our State. I herewith submit a brief report of some of the activities during the past year.

Last October we had the honor to have with us Dr. J. B. Morrison, Secretary of the Medical Society of New Jersey, who, in the name of his Society, asked the privilege of the floor in order that he might present a matter of grave importance to the profession of both States. Through some misunderstanding, a bitter controversy had arisen between the Boards of Medical Education and Licensure of the two States, which culminated in a measure of reprisal on the part of the New Jersey Board. He suggested that our Society use its good offices with the Governor of our State for the appointment of a commission to meet a similar body from his State, with a view to reconciling the difficulty. Our Governor was receptive. The two commissions met in Camden, with the result that reciprocal relations between the two States have been reëstablished.

The National Board of Medical Examiners requested that our Society should lend its efforts toward securing recognition from our Board of Medical Education and Licensure for those holding certificates from their Board to practice medicine in Pennsylvania on the same basis as those from reciprocal States. A committee from the Board of Trustees met with the Board of Medical Education and Licensure, and later with the Governor. The result of these conferences was that our Board will recognize a certificate from the National Board.

By invitation from the Executive Secretary of the Medical Society of New Jersey, there met in Atlantic City, November 7, 1925, representatives from the Medical Societies of New York, New Jersey, and Pennsylvania in a Tristate Conference "to confer regarding medical problems of mutual interest." There have been two conferences held since, one in New York City, February 26th, and the other in Philadelphia, June 21st. Reports of the two last meetings will be found in the ATLANTIC MEDICAL JOURNAL, pages 720 and 811. To those of you who have not read these reports we should suggest a careful perusal. The conferences have brought out two salient facts: (1) that both New York and New Jersey have Medical Practice Acts more comprehensive and effective than that of our State; (2) that our Compensation Law is a joke. This law in the other two States is administered by a Commission favorable to the medical profession, and its benefits are unlimited as to time or amount for services.

These conferences have been held only by mutual assent of the officers of the three State Societies, and consequently are without authority. A permanent organization has, however, been effected. The future good of these conferences is apparent to those who have attended, and the feeling is that they should be sanctioned by the respective State Societies.

The last session of our Legislature passed an act requiring the annual registration of every practitioner of the healing art and the payment of one dollar, the moneys thus received to constitute a fund for the enforcement of the Medical Practice Act. By invitation from the Board of Medical Education and Licensure, your officers have attended several conferences relative to putting the act into effect and hearing reports on the result. We are pleased to report that the Board is active, and that although up to this time the results have been somewhat disappointing because of the apparent hostility on the part of the friends of the illegal practitioners, we are assured of the ultimate good that will result.

The Standing and Special Committees and Commissions have submitted their reports. These evidence activity on their part. We do not wish to stress one above the other, but suggest careful consideration of the different recommendations. We have suggested to the Commission on Compensation Law the advisability of a careful study of the laws of New York and New Jersey, with a view of drafting a bill embodying their essential features and presenting it to our Legislature for enactment. In the event of this body ratifying this action, we bespeak a united effort to secure favorable consideration.

After repeated efforts, a suitable case has been secured whereby the legality of the Mackey decision will be determined. The case occurred in Dauphin County. It has been decided in favor of the decision

by the Referee, and has been appealed by our legal counselor to the Compensation Board. In the event of an adverse decision, it will immediately be taken before the Courts.

The Secretary then announced the following reference committees appointed by the President-Elect, Dr. Albertson:

Committee on Credentials: M. Edith MacBride, chairman, Sharon; Jefferson H. Wilson, Beaver; James D. Lewis, Scranton.

Reference Committee on Reports of Officers and Standing Committees: Carey J. Vaux, Pittsburgh, chairman; Henry G. Munson, Philadelphia; George A. Clark, Scranton.

Reference Committee on Scientific Business: J. Newton Hunsberger, chairman, Norristown; Arthur E. Crow, Uniontown; Frank G. Hartman, Lancaster.

Committee on Place of Meeting: Charles A. E. Codman, chairman, Philadelphia; William H. Mayer, Pittsburgh; John J. Brennan, Scranton.

THE SECRETARY: I will announce at this time that Room 109, the so-called Blue Room, has been set aside for the use of these committees and the Board of Trustees. Stenographers are to be found in the room adjoining, and they will be glad to assist any of you at any time. We have also arranged cards for each committee, which can be hung on the door of this room, stating which committee is in session. We trust that the chairmen of the committees will make use of this room.

THE PRESIDENT: You will find in the program the names of the members of these committees. Are there any supplemental reports to come from the officers or committees whose reports are published in the program? If not, and there is no objection, we shall refer the different reports as follows:

To the Reference Committee on Reports of Officers and Standing Committees the reports of the Secretary, Treasurer, Chairman of the Board of Trustees, Councilors, Committee on Public Relations, Committee on Archives, Committee on Society Comity and Policy, Committee on Public Health Legislation, Committee on Medical Benevolence, Committee on Promotion of Efficient Laws on Insanity, Commission on Conservation of Vision, Commission on Cancer, Commission on Defense of Medical Research.

To the Reference Committee on Scientific Business the reports of the Committee on Laboratories, Committee to Confer with Morticians, Commission to Confer with Secretaries of Health and Welfare, Commission to Study Quarantine Laws.

To the Reference Committee on New Business the report of the Commission on Compensation Laws, and the report of the Committee to Revise the Constitution and By-Laws.

We shall refer the reports of the delegates to other societies to the Committee on Reports of Officers and Standing Committees.

READING OF CORRESPONDENCE

The Secretary read a communication from Mr. H. A. Nye, Supervisor of Industrial Service, General Electric Company, Erie, Pa., as follows:

October 4, 1926.

WALTER F. DONALDSON, *Secretary*,
Medical Society of the State of Pennsylvania,
Pittsburgh, Pa.

Dear Sir:

Referring to your letter of September 1st and previous correspondence relative to radium for the free treatment of cancer in the State of Pennsylvania, which you state had been referred to Dr. Charles H. Miner, I wrote the Doctor on September 11th and on September 22d received a reply that the matter had been referred to Dr. Potter, Secretary of Welfare.

On September 23d I received a communication from Dr. Potter, reading as follows:

> "It is my judgment that it is not a function of the State to supply radium for the treatment of cancer.
>
> Local hospitals and municipalities, it seems to me, bear that responsibility and not the State, unless the State itself in its General Hospitals finds the need of a supply.
>
> As the hospitals are now constituted, cancer cases are very rare and most of our work is in the general accident field."

As far as I can ascertain there is no diminishing in the number of cancer cases; there are many people in the State who are afflicted with the disease who are not in position to meet the exorbitant expense incumbent upon them for radium treatment. I believe radium treatment is recognized by the medical fraternity as the one thing that has done more to allay the disease and effect a cure of cancer than anything else. Other states have seen fit to pass legislative measures, providing for free treatment where found necessary, and I believe that the State of Pennsylvania should not lack in this respect.

It seems to me that if any legislative action is taken, it should be instigated by the Medical Society of our State, and if we are to expect any definite action on this matter at the meeting of the next Legislature, preliminary measures should be resorted to at once.

I would like to receive a further expression from you on this subject.

Thanking you very much for the attention which you have already given the matter, I remain

Sincerely yours,

(Signed) H. A. NYE,
Supervisor of Industrial Service.

THE SECRETARY: A similar communication, received last fall, was referred by the Board of Trustees to the State Health Department. I would suggest that this now be referred to the Committee on Scientific Work.

THE PRESIDENT: It is so ordered.

The Secretary then read the following communication from the South Dakota State Medical Association, which was referred to the Committee on New Business:

The Board of Councilors adopted the following resolution:

WHEREAS, The American Public Health Association at its annual meeting in St. Louis, in October, 1925, listened to an address by one of its members, favoring a new doctor in each community where a health officer is needed, to be known as a Doctor of Public Health, and

WHEREAS, Several institutions of learning have introduced courses in public health whereby a layman, as well as a physician, may be instructed and in a comparatively short time qualify as a Doctor of Public Health (D.P.H.), and be allowed to advise, qualify, and practice preventive medicine, and

WHEREAS, In all probability a measure to license a so-called D.P.H. will be introduced into the next session of the State Legislature of South Dakota, and

WHEREAS, The South Dakota State Medical Association believes that all health officials should first be physicians (M.D.), who have the proper knowledge of the sciences concerned in public health, and that such knowledge cannot be gained by any layman in two or three years, and

WHEREAS, Such an arrangement of a layman being a health official, places a double expense on the community, since it is necessary for the community then to procure the service of an M.D., in addition to a layman, and

WHEREAS, The State confers on an M.D. the right to practice medicine and surgery in all its branches, while the special licensing of a D.P.H. would be special legislation tending to take from an M.D. that right, therefore be it

Resolved, That the South Dakota State Medical Association believes all positions of trust pertaining to public health in any community should be held by physicians (M.D.), and not by laymen holding D.P.H. licenses; and be it further

Resolved, That the South Dakota State Medical Association views with displeasure any move on the part of the American Public Health Association which may express a desire to replace physicians as health officials by laymen with D.P.H. licenses; and be it further

Resolved, That a copy of this resolution be sent to the American Public Health Association, to all those institutions of learning where courses in public health are given with a view to conferring a D.P.H. degree on laymen; and to all component societies of the South Dakota State Medical Association, that they may be acquainted with the proposed activities of a public health association whose president is a layman.

(Signed) J. F. D. COOK, M.D., *Secretary-Treasurer*,
S. D. State Medical Association.

The Secretary then read the following communication from the Chairman of the Walter Reed Commission of the Medical Society of Virginia, which was referred to the Committee on New Business:

Norfolk, Va., September 24, 1926.

IRA G. SHOEMAKER, M.D., *President*,
Medical Society of the State of Pennsylvania,
Reading, Pa.

Dear Dr. Shoemaker:

The Medical Society of Virginia desires to honor the memory of Walter Reed, and has appointed a commission of five, of

which I am chairman, to be known as the Walter Reed Commission, to endeavor to raise a fund, a part of which will be used to purchase the Walter Reed home in Gloucester County, his birthplace. This can be purchased and put in repair for $1,500. With the remainder of the fund we wish to establish the Walter Reed Chair for research work at the University of Virginia, as a memorial to him.

Believing as we do that the entire medical profession of the United States will be willing and anxious to contribute a small amount to this fund, I, as chairman of this Commission, am writing to ask if it will be feasible for you to appoint a committee of ten in your State to assist in this undertaking. Your coöperation will be greatly appreciated, not only by the commission but by the entire medical profession in Virginia.

If this suggestion meets with your approval, will you kindly appoint the committee at your earliest convenience, and notify me, giving their names and addresses.

With kindest regards, I am

Sincerely yours,
(Signed) E. C. S. Taliaferro, *Chairman.*

The Secretary: The following communication has just been given to me by Dr. Knowles, chairman of our local general committee:

To the Convention of the Medical Society of the State of Pennsylvania,
Bellevue-Stratford,
Philadelphia, Pa.
Dr. George A. Knowles, Chairman Local Committee.

My dear Dr. Knowles:

It is a great pleasure to welcome the Medical Society of the State of Pennsylvania to the Bellevue-Stratford, and the management would appreciate it very much if you will convey to your membership, through the reading of this letter at the opening session, a most cordial greeting.

We are very anxious to do everything possible for the success of your gathering, and we want you to feel thoroughly at home. The hotel staff is entirely at your service, is ready and anxious to do all it can for your comfort and convenience, and we want you to let us know if there is anything that does not meet your entire satisfaction.

Your patronage of the Bellevue-Stratford is greatly appreciated, and aside from the fact that we want your visit here to be a happy one, we have the selfish motive that we want your patronage both collectively and individually at our hotels in other cities. We know to merit this we must give our best attention to your service while you are with us here in Philadelphia.

Again extending a hearty welcome and with best wishes for a most successful convention, we are

Very sincerely yours,
(Signed) J. M. Robinson

The President: These communications will be referred to the Committee on New Business.

The Secretary: The question of disaster relief, as approved by the American Medical Association in Dallas last May, has since been called to the attention of all component societies.

The President: Referred to the Committee on New Business.

The President: The next item is new business, and the first thing I should like to suggest is a formal vote of approval by the House of Delegates of its earlier mail vote changing the time of this annual meeting from October 4-7 to October 11-14.

Dr. Theodore B. Appel moved that this action be confirmed. Motion seconded by Dr. J. Norman Henry and carried.

Dr. J. Norman Henry, Philadelphia: I have a communication relative to the One Board Bill, which was ordered to be nondesignate. The instruction from the 1925 House was that the bill should be prepared in such a way that no designation should be contained therein regarding any school of medicine. You will recall that there was a bill before the House last year which received a great deal of discussion, and the House ordered that a Committee prepare a bill to present this year. The President of the Society then appointed a committee of the Board of Trustees, which met immediately after one of the Trustees' meetings last October and took up the whole question at length. That committee resolved itself into a subcommittee consisting of Dr. Appel and myself, and it was asked that we confer with the counselor of the Society, Mr. Bernard J. Myers, of Lancaster, following along the lines mapped out by the whole committee. We have had several meetings, one very lengthy, when Dr. Appel, Mr. Myers, and I were together for five hours. When I read the proposed amendments to the existing Act, you will note that the term "practice of medicine and surgery" is used. It has been ruled by the Supreme Court that practice of any form of the healing art is practicing medicine.

Dr. Henry then presented the following report:

The Act approved the 3d day of June, 1911, established the Bureau of Medical Education and Licensure. The title of that Act is as follows: "An Act relating to the right to practice medicine and surgery in the Commonwealth of Pennsylvania; and providing a Bureau of Medical Education and Licensure as a bureau of the Department of Public Instruction; and means and methods whereby the right to practice medicine and surgery and any of its minor branches may be obtained, and exemptions therefrom; and providing for an appropriation to carry out the provisions of said act; and providing for revocation or suspension of licenses given by said bureau; and providing penalties for violation thereof, and repealing all acts or parts of acts inconsistent therewith."

Amend Section 2 of said Act of Assembly to read as follows: For the purpose of carrying out and enforcing the provisions of this Act, there shall be established in this Commonwealth a Bureau of Medical Education and Licensure to be added to the Department of Public Instruction. The said Bureau shall consist of nine (9) members, two of whom, the Superintendent of Public Instruction and the Secretary of Health, shall be ex-officio members thereof with right to vote. The seven (7) remaining members shall be appointed by the Governor of the Commonwealth, who shall appoint the same on or before September 1st, 1927. The said seven (7) members so appointed shall at the time of their appointment be licensed and qualified under the existing laws of this Commonwealth to practice medicine and surgery, and shall have practiced the same in this Commonwealth for a period of not less than ten years prior to their respective appointments. One member of the Bureau first appointed under this Act shall serve for one year, two for two years, one for three years, one for four years, and two for five years, after which the successor of each member shall be appointed for the term of five years, but no member of the Bureau shall be a member of the faculty of any undergraduate school, college, or university teaching medicine and surgery. The Governor shall furnish each person appointed with a certificate of appointment under the seal of the Commonwealth; he shall fill all vacancies caused by death, resignation, or otherwise. Appointments to fill vacancies occurring through death, resignation, or otherwise, shall be for the unexpired term of the deceased or retiring member.

Section 6 of the foregoing Act was amended by Section 5 of the Act of July 25th A. D. 1913, Pamphlet Laws page 1220.

Amend said Section 5 of the Act of 1913 aforesaid by adding at the end of the first paragraph on page 1227 of the Act the following: "Or by assistants of the same school of medicine as the respective applicant, to be employed by the Bureau and to be compensated at the rate of not more than $10 per day for each day in which they are actively engaged in the work of the Bureau, in addition to all necessary expenses incurred in connection with said examination. Assistant examiners may be selected by the Bureau from the schools of medicine now recognized by said Bureau, and from such other schools as the Bureau may in its discretion from time to time recognize; provided, said school of medicine shall present said evidence of training and examination in conformity with this Act." This to apply to examination in therapeutics, practice, and materia medica only.

These proposed changes are manifestly in the interest of efficiency and economy.

Both Dr. Appel and I are ready to answer any questions. The subject was introduced to the Board of Trustees this morning, and received a very illuminating discussion. The trustees sent these suggested amendments, to this House of Delegates with their approval. I am going to ask Dr. Appel if he will answer your questions as they are asked.

We have laid ourselves open to the appointment of a full board from any of the existing legal forms of practice, but it is perfectly incredible that such will happen. The bill is sensible and reasonable, simple and economical, and will I am sure, receive favorable consideration.

The President: What is your pleasure, gentlemen?

Dr. Theodore B. Appel: I move that the House of Delegates approve this report.

Motion seconded by several.

Dr. Appel: There is very little that I can add to what Dr. Henry has said, but there is one point that I should like to emphasize. In legislation we have two courses to pursue. We can ask for legislation controlling and governing the practice of our own members, and that would include all members of the regular profession. We can ask for special legislation, and leave the field open to any other cult that may

come up; or we can do as has been done here: we can propose to the Legislature a piece of legislation which will be simple and which will control the whole field of the practice of medicine. There are four recognized schools of practice in Pennsylvania now: ours, the homeopaths, the eclectics, and the osteopaths. At each session of the Legislature in the future, as in the past, there will be bills asking for boards to control and regulate other cults, and every two years there will come up before the Legislature a medical fight. If we can present to the Legislature a bill which we believe in, and which we hope to convince them, in turn, is drawn not in the interests of a "medical trust," but in the interest of the people of the State, I think it will have a fair chance of passing. I say in the interest of the people of the State. Under our Constitution the State has certain limited police powers. The State cannot compel any individual citizen to go for treatment of disease, whether real or imaginary, to an individual practicing any particular school of medicine, but in view of the fact that public health is one of the biggest assets of the State, it can prescribe that the individuals who deal with public health or the health of individual citizens must have certain standard qualifications. If we can put before the Legislature a bill covering these standard qualifications, including, as presented, all of the existing recognized schools, and administration of the police power of the State, I think we can show the people of the State that we are asking legislation which is absolutely fair. Dr. Henry is right in saying that we should not seek to have a prescribed number from our school on the Board. The committee concluded that a nondesignate bill was the best to present.

DR. GEORGE A. KNOWLES, Philadelphia: Would this bill put the osteopathic colleges under the jurisdiction of the existing board? At present their colleges and hospitals cannot be examined by the board.

DR. APPEL: The Act says that the four-years' course must be carried out in a school approved by the Board of Medical Education and Licensure.

The President then put to a vote Dr. Appel's motion that the House of Delegates approve the report, and it was unanimously carried.

DR. HENRY: Now that this has been approved it becomes the responsibility of the whole Society. Dr. Appel and I have consulted with Mr. Myers about ways and means of handling the matter. The Trustees thought, and we agree, that it was important that all the commissions of public health and the societies throughout the State should be thoroughly acquainted with the Act, and the question of handling the matter will require much careful study. We have some ideas of how it should be done, and intend to develop them under competent authorities. We are not going to go before the Legislature and oppose this, that, and the other piece of legislation, but we will present a constructive piece of legislation. We hope every member will feel a personal responsibility for it.

DR. WILLIAM H. MAYER, Pittsburgh: Since we have such a happy solution of the matter under discussion so long, I move that the thanks of the House of Delegates be extended to Dr. Henry and Dr. Appel.

Seconded by Dr. John A. Campbell, Williamsport, and unanimously carried.

The Secretary presented the following resolutions regarding the formation of a Section on Urology:

WHEREAS, In the past the scientific program of the Medical Society of the State of Pennsylvania has necessarily included but few topics of interest to the genito-urinary specialists, insufficient to warrant their attendance at the annual meetings, and

WHEREAS, The creation of a section devoted to this specialty would not detract from the attendance at the existing sections, but would serve rather to increase the interest, enthusiasm and attendance of the urologists throughout the State, as exemplified in the scientific work of the sections of the American Medical Association, and,

WHEREAS, Inasmuch as the State Society has in the past created sections for other specialists, the same privilege and opportunity should be accorded to the urologists, and,

WHEREAS, The petition signed by one hundred four (104) representative urologists throughout the State would seem to be practically a unanimous appeal, and,

WHEREAS, Therefore, it would seem that the consensus of opinion of the Delegates here assembled clearly indicates that the best welfare and future growth of our State Society will be served by the addition of the new Section, be it

Resolved, that a Section on Urology be created in the affairs of the Medical Society of the State of Pennsylvania for the presentation and discussion of scientific subjects and whatever other business becomes the duty of such a Section.

Motion for the adoption of the above resolution.

(Signed) CHARLES A. E. CODMAN,
ORLANDO PETTY.

SECRETARY DONALDSON: I would like to say that the Board of Trustees took action on a similar request some months ago, and have made a report through the chairman of the Board giving their recommendations. Since that time the Secretary has received an additional list of names, making up the 104, and I have communicated with Dr. B. A. Thomas, suggesting that he appear before the House on Wednesday morning, when he may be granted the privilege of the floor and permitted to discuss the matter. I also advised him to appear before the Committee on Reports of Officers and Standing Committees. I think it would be proper to refer this petition to that committee.

THE PRESIDENT: It is so ordered. We shall now consider the report of the Committee on Revision of the Constitution and By-Laws, which report was referred to the Reference Committee on New Business. The chairman of that committee will report.

DR. J. NEWTON HUNSBERGER, Norristown: The Reference Committee on New Business, after a careful study of the proposed amendments to the Constitution and By-Laws, submits the following report:

CONSTITUTION

Article VIII, Section 1, and Chapter V, Section 3 and Section 5, we recommend the suggested change of combining the offices of the Secretary and the Treasurer into one—Secretary-Treasurer.

Article IV, Section 2, of the Constitution to remain unchanged. We recommend the adoption of the committee's suggested change in Article IV, Section 5.

We recommend the committee's suggestion regarding the insertion of words "or accredited alternate" in Article V.

We heartily concur in the same article in substituting the secretary as delegate and the president as his alternate.

In Article VIII, Section 1, we approve the suggested change from ten to eleven trustees, as recommended by the committee.

We believe no change should be made in Article VIII, Section 1, as to the number of vice-presidents.

We recommend the committee's suggestion in Article VIII, Section 3, concerning the time of the election of trustees, and that the additional trustee be elected this year.

BY-LAWS

Chapter I, Section 2, we recommend the committee's suggestion in inserting the words "in session."

We recommend the committee's suggestion in cutting out Section 7 of Chapter II.

We recommend the committee's suggestion concerning Chapter III, Section 1, in regard to the rearrangement of councilor districts.

We recommend the committee's suggestion concerning Chapter III, Section 2, as to the nomination by component county medical societies of a suitable member for district censor.

We recommend the committee's suggestion concerning Chapter III, Section 3, regarding appeal from the county societies' Boards of Censors.

We recommend the committee's suggestion regarding Chapter III, Section 4.

In Chapter VI, Section 8, we recommend the committee's suggestion in regard to adding the Editor of the JOURNAL to the Press Committee.

We recommend the committee's suggestion regarding Chapter VIII, Section 3, in regard to the eligibility of applicants for county societies.

We recommend the committee's suggestion in regard to inserting the word "councilor" in Chapter VIII, Section 4.

We heartily endorse the committee's suggestion for Chapter VIII, Section 7, regarding physicians holding membership in but one component county society.

We heartily endorse the committee's suggestion in regard to adding a section to Chapter VIII regarding the prompt remittance of the State Society's annual assessment upon their receipt, to the State Secretary.

We recommend that Section 2 of Chapter VIII be omitted.

I move that the report of the Reference Committee on New Business be received and that the recommendations just read be taken up *seriatim*.

Motion seconded by several and unanimously carried.

Dr. Hunsberger then read the first recommendation and moved its adoption.

Motion seconded.

SECRETARY DONALDSON: You will find in the first portion of the report of the Committee to Revise the Constitution and By-Laws, as published on page 129 of the Program, the following paragraph:

"In the interest of better functioning of our organization, we make the following suggestion, which we believe should have publicity and study by a committee of the House for presentation to the 1927 House of Delegates":

This recommendation of Dr. Hunsberger's committee is not clear.

Dr. Theodore B. Appel moved that the suggestion be laid on the table until 1927.

Motion seconded and carried.

Dr. Hunsberger read the recommendation regarding Article IV, Section 2, and moved its adoption.

Motion seconded.

DR. BRENHOLTZ: Immediately after the State Society adopted this by-law, our county society adopted one to correspond with it, accepting a half-year's dues after July and remitting appropriately to the State Secretary.

This question was further discussed by Drs. Quigley, Mayer, Donaldson, Hartman, and Croskey.

THE PRESIDENT: The motion is that Article IV, Section 2, of the Constitution shall remain as at present. What is your pleasure?

The motion was voted upon and carried.

Dr. Hunsberger read the recommendation in regard to the suggested change in Article IV, Section 5, and moved its adoption.

Motion seconded by Dr. Appel and carried.

Dr. Hunsberger read the recommendation regarding the substitution of the secretary as delegate and the president as his alternate and moved its adoption.

Motion seconded by Dr. Appel.

Discussed by Drs. Brenholtz, Quigley, and Mayer, after which the motion was voted upon by roll call and lost by a vote of 47 to 21.

Dr. Hunsberger read the recommendation regarding the insertion of the words "or accredited alternate" in Article V and moved its adoption.

Motion seconded by Dr. Appel and unanimously carried.

Dr. Hunsberger read the recommendation regarding the change in the number of trustees and moved its adoption.

Seconded by Dr. Scull and carried.

Dr. Hunsberger read the recommendation in regard to the number of vice-presidents and moved its adoption.

Seconded by Dr. Appel and carried.

Dr. Hunsberger read the recommendation concerning the time of election of trustees and moved its adoption. Motion seconded.

DR. APPEL: I think there should be some action in addition as to when this goes into effect. I should amend so that the additional trustee may be elected this year.

DR. MAYER: The committee will accept the suggestion.

The motion with the instruction for this year's House, was carried.

Dr. Hunsberger read the first recommendation in regard to the change in Chapter I, Section 2, of the By-Laws and moved its adoption.

Motion seconded by Dr. Appel and carried.

Dr. Hunsberger then read the recommendation in regard to cutting out Section 7 of Chapter II and moved its adoption.

Motion seconded.

The Secretary read the recommendation of the Committee on By-Laws as printed in the program and the September, 1926, JOURNAL, following which Dr. Hunsberger's motion was put to a vote and carried.

Dr. Hunsberger then read the recommendation in regard to Chapter III, Section 1, relating to the rearranging of councilor districts, and moved its adoption.

Motion seconded by Dr. Appel.

DR. LITCHFIELD: I wish to call attention to an error in the wording. Perry County was unintentionally put into the Fifth Councilor District, but it should be named under the Sixth Councilor District. I have spoken to members of both these councilor districts, and they much prefer to have Perry in the sixth district and not the fifth. I offer this as an amendment.

DR. MAYER: The committee will accept this.

Dr. Hunsberger's motion to adopt as amended was then put to a vote and carried.

Dr. Hunsberger read the recommendation regarding Section 2 of Chapter III and moved its adoption.

Motion seconded by Dr. Delaney and carried.

Dr. Hunsberger read the recommendation regarding Section 3 of Chapter III and moved its adoption.

Motion seconded by Dr. Mayer and carried.

Dr. Hunsberger read the recommendation regarding Section 4 of Chapter III and moved its adoption.

Motion seconded by Dr. Robinson.

The Secretary read the proposed amendment as printed in the Program.

DR. APPEL: These amendments eliminate the censorial districts. In the Fifth Councilor District the censorial district meetings were very popular, and it is the feeling in that district that we should like to continue such meetings. I move to amend by these words "each councilor district shall hold one or more district meetings."

DR. MAYER: The committee accepts.

The motion to adopt with the amendment was then put to a vote and carried.

Dr. Hunsberger then read the recommendation regarding Section 8 of Chapter VI and moved its adoption.

Motion seconded by Dr. Robinson and carried.

Dr. Hunsberger then read the recommendation regarding Section 3 of Chapter VIII and moved its adoption.

Motion seconded by Dr. Appel.

The Secretary read the amendment as printed in the Program.

Dr. Hunsberger's motion to adopt was put to a vote and carried.

Dr. Hunsberger read the recommendation regarding Section 4 of Chapter VIII and moved its adoption.

Seconded by Dr. Mayer and carried.

Dr. Hunsberger read the recommendation regarding Section 7, Chapter VIII, and moved its adoption.

Motion seconded by Dr. Albertson and carried.

Dr. Hunsberger read the recommendation in regard to the addition of Section 11 to Chapter VIII and moved its adoption.

Dr. Hunsberger moved the adoption of the report as a whole.

Motion seconded by several and carried.

Dr. Hunsberger moved the approval of the revised Constitution and By-Laws.

Seconded and carried.

CONSTITUTION

ARTICLE I.—NAME

The name and title of this organization is The Medical Society of the State of Pennsylvania.

ARTICLE II.—PURPOSES OF THIS SOCIETY

The purposes of this Society shall be to federate and bring into one compact organization the entire medical profession of the State of Pennsylvania; to unite with similar societies of other states to form the American Medical Association; to extend medical knowledge and advance medical science; to elevate the standard of medical education, and to secure the enactment of just medical laws; to promote friendly intercourse among physicians; to protect them against imposition and to enlighten and direct public opinion in regard to the problems of public health and hygiene, so that the profession shall become more useful to the public in the prevention and management of disease and in prolonging and adding to the comfort of life.

ARTICLE III.—COMPONENT SOCIETIES

Component societies shall be those county medical societies whose several constitutions and by-laws have been approved by this Society.

ARTICLE IV.—MEMBERSHIP

SECTION 1.—The membership of this Society shall consist of citizens of the United States, members in good standing in the component county medical societies, and whose annual assessments in this Society have been paid. This, however, shall not be construed to exclude from active membership any physician who may occupy a teaching position with any college or university within this state.

Physicians, otherwise qualified, who have taken their first citizenship papers, shall be eligible to membership. This membership is conditional upon the completion of citizenship within six years of the granting of first papers. Failure to comply with this provision will automatically terminate membership.

SECTION 2.—Members whose annual assessments are received by the Secretary of this Society on or before March 31st, shall be entitled to all the privileges of this Society for the current year. One whose assessment is received after March 31st shall not be entitled to any benefit from the Medical Defense Fund from January 1st to the date of the receipt by the Secretary of this Society of his name and assessment. The assessment of new members, elected and reported between July 1st and November 1st, shall be one-half the annual assessment. Assessments received for new members elected and reported in November or December shall be the full annual assessment, which shall cover the assessment for the following calendar year.

SECTION 3.—Each member in attendance at the annual session of this Society shall enter his name on a registration blank, indicating the component county medical society of which he is a member. When his right to membership has been verified by the official roster of this Society, he shall have a right to all the privileges of membership at that session. No member shall take part in any of the proceedings of the annual session until he has complied with the provisions of this section.

SECTION 4.—Any person who is under sentence of suspension or expulsion from a component county medical society or whose name has been dropped from its roll of members shall not be entitled to any of the rights or benefits of this Society, nor shall he be permitted to take part in any of its proceedings until he has been relieved of such disability.

SECTION 5.—Delegates to this Society from any state society entitled to representation in the American Medical Association shall, by presenting certificates of delegation duly signed, be entitled to seats and to participate only in the scientific business of this Society.

SECTION 6.—Any physician of reputable standing, not a resident of Pennsylvania, but a member of his own state or territorial medical association, after an introduction by a member present, may by vote of a general meeting or of a section, be accorded the privilege of participating in the scientific discussions.

SECTION 7.—Any distinguished physician not a resident of this state but a member of his own state or territorial medical association may be elected an honorary member of this Society by the House of Delegates by a three-fourths vote at any annual session. Not more than two may be thus elected in any one year.

SECTION 8.—Scientists occupying teaching positions in medical institutions of the state, and not possessing a medical degree, may, upon the recommendation of the Committee on Society Comity and Policy, be elected honorary members by the House of Delegates by a three-fourths vote at any annual session.

SECTION 9.—A member of this Society who has been a member for a continuous term of fifteen years, who is not less than sixty-five years of age, may, on request of his component county medical society, be made an Affiliate Member, provided he holds such membership in his component society as shall relieve him from the payment of dues in his component society. A component society shall not be required to pay any annual assessment for an Affiliate Member. Affiliate members shall be privileged to participate in the scientific discussions of this Society; they shall receive the JOURNAL of the Medical Society of the State of Pennsylvania; they shall be eligible to the benefits of the Medical Benevolence Fund, but they shall not be entitled to the benefits of the Medical Defense Fund.

ARTICLE V.—HOUSE OF DELEGATES

The House of Delegates shall be the legislative body of this Society, and shall be composed of: (1) Delegates, or accredited alternates, designated by the component county medical societies (each component county medical society shall be entitled to send to the House of Delegates each year one delegate for every 100 of its members or fraction thereof; (2) the presidents of the component county medical societies or, in the absence of the president, the secretary of the component county medical society; (3) the President of this Society; and (4) ex-officio the Trustees, Secretary, Treasurer, and ex-presidents of this Society, but without the right to vote.

If any component county medical society is without representation at the close of the roll call of the second meeting of any session of the House of Delegates, then the members registered in attendance from that county may select from their number the number of delegates which such county is regularly entitled to elect; if but one member is registered he shall be seated as a representative of that county. When any delegate is once seated, no change may be made during the session. No individual member shall be entitled to more than one vote.

No individual, occupying an ex-officio membership in the House of Delegates, shall be seated as a delegate with vote.

Article VI.—Sections

The House of Delegates may provide for a division of the scientific work of this Society into appropriate sections.

Article VII.—Sessions and Meetings

Section 1.—This society shall convene in annual session on the first Tuesday of October at such place as may be determined by the House of Delegates, and each session shall continue for three days, or longer, if required by the business of the Society. The House of Delegates may by a three-fourths vote, which may be taken by mail, change the time or place of the next annual session.

Section 2.—Special meetings, either of this Society or of the House of Delegates, shall be called by the President on petition of twenty delegates or one hundred members.

Article VIII.—Officers

Section 1.—The officers of this Society shall be a president, four vice-presidents, a secretary, a treasurer, an assistant secretary, eleven trustees, who are also councilors, and as many district censors as there are component county medical societies.

Section 2.—The officers, except the trustees, shall be elected annually by the House of Delegates to serve for one year, or until their successors are elected and installed.

Section 3.—Two trustees shall be elected by the House of Delegates annually, except each fifth year when three shall be elected, to serve for a period of five years. No trustee shall be eligible to succeed himself after he has served two full consecutive terms. Each councilor district shall be entitled to one trustee. A trustee must be a member of one of the component societies of the councilor district which he represents.

Article IX.—Funds

Section 1.—Funds shall be raised by an equal annual assessment on each member of the several component county medical societies. The amount of the assessment is to be fixed by the House of Delegates annually. Funds may also be raised by voluntary contributions and in any other manner approved by the House of Delegates. Funds may be appropriated by the House of Delegates to defray the expenses of this Society for publication and for such other purposes as will further the interests of this Society.

Section 2.—Each year, out of the funds of this Society, the trustees may appropriate a sum not to exceed $1.00 for each member, to be set aside by the Treasurer as a special fund to be known as the Medical Defense Fund. This fund shall be kept separate from other moneys and may be invested by the Treasurer under the direction of the Board of Trustees and shall be used only for the legitimate expenses of members threatened with or prosecuted for alleged malpractice; provided, however, that no member of this Society shall be entitled to the benefits of this fund who was not in resident practice in the State of Pennsylvania when the alleged act of malpractice was committed.

Section 3.—Each year, out of the funds of this Society, the trustees shall appropriate a sum not to exceed $1.00 for each member, to be set aside by the Treasurer as a special fund to be known as the Medical Benevolence Fund. This fund shall be kept separate from other moneys and may be invested by the Treasurer under the direction of the Board of Trustees, and shall be used only for the relief of pecuniary distress of sick or aged members or the parents, widows, widowers or children of deceased members.

Article X.—Referendum

Section 1.—A general meeting of this Society may, by a two-thirds vote of the members present, order a general referendum on any question pending before or on any action taken by the House of Delegates, and when so ordered the House of Delegates shall submit such questions to the members of this Society, who may vote in person or by mail, within fourteen days. The votes shall be received by the Chairman of the Board of Trustees and be counted by the President and Secretary of this Society and the result reported to the House of Delegates. If the vote is taken by mail, the vote, to be valid, must be participated in by a majority of the members of this Society to determine any question, when it shall be binding upon the House of Delegates.

Section 2.—The House of Delegates may, by a two-thirds vote, submit any question before it to a general referendum, as provided in the preceding section, and the result shall be binding on the House of Delegates.

Article XI.—Seal

Section 1.—This Society shall have a common seal, with power to break, change or renew the same at pleasure.

Section 2.—The seal shall contain the monogram "A. M. A." and "1847," within a circle on a keystone, at the sides of which shall appear: "Organized, 1848; Chartered, 1890," and the whole surrounded by a double circle containing the words, "Medical Society of the State of Pennsylvania."

Article XII.—Amendments

Proposals for amendments or alterations to this Constitution may be offered at any annual session or during the interim. If offered during the interim, such proposals must be sent to the Secretary of this Society at least four months before the next annual session. All proposals for amendments or alterations must appear either in the published minutes of the annual session or must be published in the Journal of this Society at least three months before the next annual session; and all such proposals for amendments or alterations must appear in the official call for the next annual session. If these conditions have been fulfilled, then the House of Delegates may adopt such proposals by a two-thirds vote of the delegates present at the next annual session.

BY-LAWS

Chapter I.—General Meetings

Section 1.—All registered members may attend and participate in the proceedings and discussions of the general meetings and in the scientific work of the sections. The general meetings shall be presided over by the President, or by one of the Vice-Presidents, and at these meetings shall be presented the address of the President, together with such scientific papers and discussions as may be arranged for in the program.

Section 2.—The general meeting or any of the sections in session may recommend to the House of Delegates the appointment of committees or commissions for scientific investigations of special interest and importance to the profession and the public.

Chapter II.—House of Delegates

Section 1.—The House of Delegates shall meet on the day before that fixed as the first day of the annual session. It may adjourn from time to time as may be necessary to complete its business, provided that its

hours shall conflict as little as possible with the general meetings. The order of business shall be arranged as a separate section of the program.

SECTION 2.—Each delegate, before being seated, shall deposit with the Committee on Credentials a certificate signed by the President and Secretary under seal of the component county medical society, stating that he has been legally and regularly designated as a delegate to this Society.

SECTION 3.—Twenty delegates shall constitute a quorum.

SECTION 4.—The House of Delegates shall give diligent attention to and foster the scientific work and spirit of this Society, and shall constantly study and strive to make each annual session a stepping stone to future ones of higher interest.

SECTION 5.—It shall consider and advise as to the interests of the public, wherein it is dependent upon the profession, and shall use its influence to secure proper medical and public health legislation and to diffuse popular information of an educational nature in relation thereto.

SECTION 6.—It shall make careful inquiry into the condition of the profession in each county in the state, and shall have authority to adopt such methods as may be deemed most efficient for building up and increasing the interest in such component county medical societies as already exist, and for organizing the profession in counties where societies do not exist. It shall specially and systematically endeavor to promote friendly intercourse among physicians of the same locality, and shall continue these efforts until every legally qualified physician in every county of the state who is reputable has been brought under organized medical society influence.

SECTION 7.—It shall elect representatives to the House of Delegates of the American Medical Association in accordance with the Constitution and By-Laws of that body.

CHAPTER III.—COUNCILOR DISTRICTS

SECTION 1.—The State of Pennsylvania shall be divided into eleven Councilor Districts, and each district shall be entitled to one Councilor. The Councilor Districts shall be composed of the following counties:

First Councilor District: Philadelphia County.

Second Councilor District: Berks, Bucks, Chester, Delaware, Montgomery, and Schuylkill Counties.

Third Councilor District: Carbon, Lackawanna, Lehigh, Luzerne, Monroe, Northampton, Pike, and Wayne Counties.

Fourth Councilor District: Bradford, Columbia, Montour, Northumberland, Susquehanna, Snyder, Sullivan, and Wyoming Counties.

Fifth Councilor District: Adams, Cumberland, Dauphin, Franklin, Fulton, Lancaster, Lebanon, and York Counties.

Sixth Councilor District: Blair, Center, Clearfield, Huntingdon, Juniata, Mifflin, and Perry Counties.

Seventh Councilor District: Cameron, Clinton, Elk, Potter, Tioga, Lycoming, and Union Counties.

Eighth Councilor District: Crawford, Erie, Forest, Mercer, McKean, and Warren Counties.

Ninth Councilor District: Armstrong, Butler, Clarion, Indiana, Jefferson, and Venango Counties.

Tenth Councilor District: Allegheny, Beaver, Lawrence, and Westmoreland Counties.

Eleventh Councilor District: Bedford, Cambria, Fayette, Greene, Somerset, and Washington Counties.

SECTION 2.—Each councilor district shall have a separate board of censors. The board shall be formed by the House of Delegates of this Society electing one censor from each component county medical society in the councilor district. Each component county medical society is requested to present to the House of Delegates for its consideration the name of a suitable member for district censor.

SECTION 3.—The censors of each district shall consider every case of appeal from the decision of a component county medical society by a member who has been censored, suspended, or expelled, provided that the appeal is made within three months after the censure, suspension, or expulsion. They shall report in writing their decision thereon to the county medical society, and also to the councilors of this Society. They shall consider and dispose of all questions affecting the principles of medical ethics that may be referred to them, either by a component county medical society or by this Society. The decision of the censors in every case must be signed by a majority of the board. In case a district contains an even number of censors, and a tie vote results, the councilor for that district shall cast the deciding vote. Any appeal or judicial question arising in a district composed of less than three county societies shall be referred directly to the judicial council of this Society.

SECTION 4.—Each councilor district shall hold one or more district meetings each year for the purpose of increasing acquaintance, good fellowship, and organization among the physicians of the district. Only members of the component medical societies in that district shall be eligible to membership or office at such meeting, but all physicians residing in the district who are eligible to membership in a component county medical society shall be invited to the meetings.

CHAPTER IV.—ELECTION OF OFFICERS

SECTION 1.—All elections shall be by ballot of the House of Delegates and a majority of votes cast shall be necessary to elect.

SECTION 2.—The election of officers shall be the first order of business of the House of Delegates after the reading of the minutes on the morning of the second day of the General Session. This order of business may be postponed to a definite time and place by a two-thirds vote of those present. In the election of officers of this Society, the Secretary shall call the roll of members of the House of Delegates, and each member, as his name is called, shall come forward to the President's desk and deposit his ballot. The President shall then appoint three members as tellers, who shall count the ballots under the supervision of the Secretary.

SECTION 3.—Any person known to have solicited votes for, or sought after, any office within the gift of this Society shall be ineligible for any office for two years.

SECTION 4.—The Chairman and Secretaries of all Sections provided for by action of the House of Delegates shall be elected by the several sections at executive meetings held on the second day of the annual session.

SECTION 5.—INSTALLATION OF OFFICERS.—The officers of this Society, except the President, shall assume their duties at the close of the last meeting of the annual session at which they are elected.

SECTION 6.—INSTALLATION OF THE PRESIDENT.—The President shall be installed at the first general meeting of the annual session following that at which he was elected.

CHAPTER V.—DUTIES OF OFFICERS

SECTION 1.—The President shall preside at all meetings of this Society, and at the meetings of the House of Delegates. At the first general meeting of the annual session following his election he shall deliver an address on such matters as he may deem of importance to this Society. He may at any time make suggestions in writing to the House of Delegates or to any special or standing committee. He shall be ex officio a member of the Board of Trustees and Councilors. He shall be ex officio a member of all standing or special committees.

SECTION 2.—The Vice-Presidents shall assist the President in the performance of his duties; during his absence or at his request one of them shall officiate in his place. In case of the death, resignation or removal of the President, the vacancy shall be filled by the ranking Vice-President.

SECTION 3.—The Secretary shall attend the general meetings of this Society, the meetings of the House of Delegates and of the Board of Trustees. He shall have no vote in the Board of Trustees, nor in the House of

Delegates. He shall keep the minutes of their respective proceedings in separate record books. He shall be custodian of all record books and papers belonging to this Society. He shall receive and receipt for the annual assessments from the component county medical societies. He shall provide for the registration of the members and the delegates at the annual session. He shall aid the Councilors in the organization and improvement of component county medical societies, and in the extension of the influence and usefulness of this Society. He shall conduct the official correspondence, notifying members of meetings, officers of their election, and committees of their appointment and duties. He shall employ such assistance as may be ordered by the Trustees, and shall make an annual report to the House of Delegates. He shall supply each component county medical society with the necessary receipts and blanks for making its report. Acting with the Committee on Scientific Work, he shall prepare and issue all programs.

SECTION 4.—The Assistant Secretary shall act as an aid to the Secretary, especially during annual sessions, and may take his place when necessary as a temporary secretary.

SECTION 5.—The Treasurer shall hold all funds of this Society together with bequests and donations and deposit the same in such banks or trust companies as may be designated as depositories by the Board of Trustees. He shall pay money out of the treasury only on written orders signed by the President and countersigned by the Secretary. He shall render annually to this Society a full account of the state of funds. He shall give bond of a surety company, in an appropriate amount, for the faithful performance of his duties.

SECTION 6.—At the first meeting of the Board of Trustees after the annual session of this Society, it shall organize by electing a chairman and a clerk, who shall keep a record of the minutes in the absence of the secretary. The chairman shall appoint a finance committee of three and a committee on supervision and publication of a medical journal. The Board of Trustees shall have charge of all properties and the financial affairs of this Society. It shall recommend to the House of Delegates the amount of the annual assessment. It shall be the duty of the Board of Trustees to provide for and superintend the publication of a medical journal and of all proceedings, transactions, and memoirs of this Society. It shall have full discretionary power to omit from the medical journal, in part or in whole, any paper that may be referred to it for publication. It shall appoint an Editor of the journal and such assistants as may be necessary, and shall determine the salaries and the terms and conditions of their appointment.

It shall exercise general supervision over the conduct of all committees in the interval between sessions.

It shall be empowered to appoint an Executive Secretary, who shall perform such executive duties as the Board may designate, and who shall receive such salary and serve for such period and under such conditions as the Board may determine.

It shall be empowered to employ such administrative representative, or representatives for the Society as shall be needed to conduct the work outlined by the Committee on Public Relations, or any other constituted or appointed committee.

These representatives' activities shall be only of an executive nature, since all policies of this Society shall originate within the House of Delegates, the Board of Trustees, or within appointed or constituted committees. The term of employment of such representatives shall not exceed one year; the salary and conditions of their employment shall be determined by the Board of Trustees.

SECTION 7.—The Board of Trustees shall have full control of all arrangements for the annual session. It may employ a Manager of Sessions and Exhibits, who shall carry out all the business details incident to the annual session of this Society. He shall provide suitable accommodations for the meeting places of this Society, Board of Trustees and the House of Delegates and their respective committees. He shall enlist the coöperation of the local Committee on Arrangements, approve all its actions before this Society, and shall be responsible for expenditures recommended by the local Committee. He shall report an outline of the arrangements to the Secretary for publication in the program and in the medical journal, and make such additional announcements during the session as occasion may require. He shall render to the Board of Trustees a full and itemized account of all receipts and expenditures on account of the annual session, and he shall, from time to time, remit moneys received to the Treasurer. All items of expense in connection with the annual session shall be paid out of the treasury on written orders signed by the President and approved by the Chairman of the Finance Committee of the Board of Trustees, excepting such small items as may be paid from a "Revolving Petty Cash Fund," which may be provided for this purpose. He shall receive a salary to be fixed annually by the Board of Trustees. He shall give a bond of a surety company in the sum of $1,000 for the faithful performance of his duties.

The Board of Trustees may, at their discretion, combine any of these designated positions in a manner which they may deem in the best interests of this Society.

All resolutions or recommendations of the House of Delegates pertaining to the expenditure of money must be approved by the Board of Trustees before the same shall become effective. During the annual session of this Society, the Board shall hold meetings as often as may be deemed necessary and all matters referred to it by the House of Delegates shall be reported on within twenty-four hours if so requested by the House of Delegates. The Board of Trustees shall have the accounts of the Secretary and the officers of the Journal audited annually or oftener if deemed desirable and shall make an annual report on the same to the House of Delegates. This report shall specify the character and cost of all publications of this Society during the year and the amount of all properties belonging to this Society.

In case of vacancy in the office of Secretary or Treasurer, on account of death, or otherwise, the vacancy shall be filled by the Board of Trustees until the next annual session of the House of Delegates.

The Board of Trustees shall designate the salary of the Secretary and Treasurer.

Regular meetings of the Board shall be held immediately after the annual session of this Society, and on the first Tuesday in the months of December and February, and on the second Tuesday in May of each year. Special meetings of the Board may be called at any time by the Chairman or by six members of the Board. Six members of the Board shall constitute a quorum. During the intervals between the sessions of the House of Delegates, the Board of Trustees shall supervise the action of committees constituted by the action of the House of Delegates.

SECTION 8.—BOARD OF COUNCILORS.—Each Councilor shall be judicial representative of this Society for a district consisting of certain counties. He shall visit the counties in his district at least once a year, for the purpose of organizing component county medical societies where none exist; for inquiring into the condition of the profession, and for improving and increasing the zeal of component county medical societies and their members. He shall make an annual report of his work and of the condition of the profession of each county in his district at the annual session of the House of Delegates. The necessary traveling expenses incurred by such Councilor, in the line of duties herein imposed, may be allowed on a properly itemized statement; but this shall not be construed to include his expenses when attending the annual session of this Society.

SECTION 9.—The Board of Councilors shall be the judicial council of this Society. It shall consider all questions involving the rights and standing of members, whether in relation to other members, to the component county medical societies, or to this Society. All

questions of an ethical nature brought before the House of Delegates or the General Meeting shall be referred to the Council without discussion. It shall decide all questions of discipline affecting the conduct of members or component county medical societies, on which an appeal is taken from the decision of the Board of Censors, and its decision in all such matters shall be final.

SECTION 10.—In sparsely settled sections it shall have authority to organize the physicians of two or more counties into a society. Such societies, when organized and after their constitution and by-laws have been approved by this Society, shall be entitled to all rights and privileges provided for component county medical societies.

SECTION 11.—The Board of Councilors shall select a member of the bar of Pennsylvania as legal counsel of this Society, and is empowered to pay such counsel an annual retaining fee. To the legal counsel shall be submitted all suits for alleged malpractice brought against members of this Society and he shall be asked to endorse local counsel suggested by the Councilor to defend such suits. To him also shall all proposed appeals to higher courts be submitted. The proper fees for defending members of this Society in suits for alleged malpractice shall be paid out of the Medical Defense Fund, provided that the member has placed his case in the hands of this Society in accordance with the regulations adopted by the Council and approved by this Society, as follows:

a. A member sued or threatened with suit for alleged malpractice should at once fill out the application blank, which can be secured from the Councilor for the District or from the Secretary of this Society. The Society will not undertake the defense of any member unless his application is made within seven days after service of summons.

b. Legal procedure requires that an appearance be made in court within thirty days after service of summons. If deemed expedient by the District Councilor he may, having ascertained from the Secretary of this Society that the member making application was in good standing at the time of the alleged malpractice, retain an approved attorney to make appearance in court in response to service of summons. The Society will not be responsible for attorney's fees incurred in behalf of any applicant, the defense of whom has not been approved by the Councilor for the District.

c. Before other assistance than the service specifically provided for in paragraph "b" may be given, the application must be endorsed by unanimous vote of all the Censors of his county medical society present at a special meeting called for the consideration of the worthiness of the applicant's case, as well as for the consideration of the applicant's standing in his society. It should be understood that the endorsement of the Censors of a county medical society carries with it not only moral support, but their active participation in the conduct of the trial in any way they may best assist, and all without thought of pecuniary return.

d. Immediately after the application has received the endorsement of the Censors of the county medical society, it shall be returned to the Councilor of the District.

e. After the application has received the endorsement of the county medical society censors and the Councilor for the District, the management of the member's defense will rest with the Committee of Council—the Councilor for the District, the President, the Secretary of this Society, and the necessary attorney or attorneys.

f. The Councilor for the District or the Secretary of the State Society, or both, shall then arrange and conduct a conference with the legal representatives and other parties concerned, having in view the thorough discussion of all circumstances pertaining to the threatened suit and the possibility of its withdrawal. The Councilor or Secretary, or both, upon approval by the Trustees shall be paid for their time expended in this particular service and have refunded their legitimate expenses.

g. The applicant shall sign a contract vesting in the Committee of Council sole authority to conduct the defense of his suit, and he shall agree to make no compromise or settlement of the case without the consent of the Councilor of his District given in writing.

h. The State Society will not undertake the defense of any member who, after investigation by the Censors and Councilors for the District, is believed guilty of criminal abortion, feticide, homicide or any criminal act, or who has not conformed to the recognized ethical laws in regard to these cases. It will only defend suit brought in the course of legitimate professional work.

i. The State Society will not pay any expenses for serving subpœnas nor the expense of witnesses residing within the county, nor will it pay judgment for find awarded or imposed by the jury or court.

CHAPTER VI.—COMMITTEES

SECTION 1.—The standing committees of this Society shall be as follows, the appointments, when not otherwise provided for, to be made annually by the President:

A Committee on Scientific Work.
A Committee on Public Relations.
A Committee on Public Health Legislation.
A Committee on Society Comity and Policy.
A Committee on Benevolence.
A Committee on Arrangements.
A Press Committee.

SECTION 2.—The Committee on Scientific Work shall consist of the President, Secretary, Editor, Manager of Sessions and Exhibits, Chairman of the Committee on Arrangements, Chairman and Secretaries of the Sections, Chairman of the Finance Committee of the Board of Trustees, and the Chairman of the Committee on Scientific Work appointed annually by the President. It shall determine the character and scope of the scientific proceedings of this Society for each session, subject to the instructions of the House of Delegates. At least thirty days previous to each annual session it shall prepare a program to be issued by the Secretary, announcing the order in which papers and discussions shall be presented.

SECTION 3.—The Committee on Public Relations shall consist of nine members appointed by the President, three of whom are appointed annually to serve for three years, and ex officio the President, the President-Elect, the Chairman of the Board of Trustees, the Chairman of the Finance Committee of the Board of Trustees, and the Secretary. It shall organize annually and elect its chairman. It shall conduct and direct campaigns of public education in matters of public health and hygiene. It shall assist the component societies in the conduct of similar campaigns and shall act as a source of information to individuals, or civic or state bodies, who seek enlightenment on matters of public health, medical legislation or scientific medicine. It shall act under the direction of the House of Delegates and in the interim between meetings it is authorized to institute such activities as, in its judgment, will further the purposes of this Society. The President may appoint committees to deal with special problems which may arise, such committees to work in conjunction with the Public Relations Committee.

SECTION 4.—The Committee on Public Health Legislation shall consist of five members and the President, Secretary, and ex-officio the Executive Secretary. This Committee shall represent the Society in securing legislation in the interest of public health and scientific medicine. It shall act under the direction of the House of Delegates, and in the interim between the meetings of the House of Delegates it is authorized to undertake such activities as in its judgment will further the purpose it represents.

SECTION 5.—The Committee on Society Comity and Policy shall consist of five members. This Committee shall keep informed concerning matters between this

Society and the American Medical Association, between this Society and the component county medical societies, and between component county medical societies and their members, and shall recommend to the House of Delegates such action as will best uphold the dignity and honor of the medical profession, exalt its standards, extend its sphere of usefulness and promote the advancement of medical science.

It shall be the duty of the Committee, after careful consideration, to submit to the House of Delegates a list of nominees for delegates and alternates to the House of Delegates of the American Medical Association. These nominations shall not preclude nominations from the floor of the House of Delegates.

Section 6.—The Committee on Benevolence shall consist of the Secretary and three members to be selected annually by the Trustees, at least one of whom shall be a Trustee. This committee shall select its own chairman, secretary and treasurer, and shall have absolute and confidential jurisdiction over the distribution of such part of the Medical Benevolence Fund as may be placed in its hands. No money shall be paid from its treasury except on warrant signed by the chairman and secretary of the Committee, and an annual audit of its accounts shall be made by a committee of the trustees, the names of the beneficiaries being omitted. All beneficiaries shall be designated by number, and after each annual audit all communications tending to show the personality of the same shall be destroyed. This Committee may solicit subscriptions, donations and legacies to be added to the principal of the Medical Benevolence Fund. It may also receive subscriptions to be used for the relief of members in distress from the effects of any special catastrophe.

Section 7.—The Committee on Arrangements shall be appointed by the President on the recommendation of the component county medical society of the county in which the annual session is to be held. The Committee shall effect an organization and coöperate with and work under the advice and supervision of the Manager of Sessions and Exhibits in making arrangements for the annual session.

Section 8.—The Press Committee shall consist of the Secretary, the Editor of the Journal, the Manager of Sessions and Exhibits and the Chairman of the Local Committee on Arrangements. This Committee shall have power to add to its number as needed and shall designate the duties of each member so appointed. This Committee shall have general censorship over all matters for the public press in connection with the transactions of the general meetings, the scientific sections and the House of Delegates.

Chapter VII.—Committees of the House of Delegates

Section 1.—The regular committees of the House of Delegates shall be as follows, the appointments to be made annually by the President-Elect early in September from the members already reported as members of the House of Delegates for the coming session of this Society.

A Committee on Credentials.

A Reference Committee on Reports of Officers and Standing Committees.

A Reference Committee on Scientific Business.

A Reference Committee on New Business.

A Committee on Place of Meeting.

Section 2.—The Committee on Credentials of the House of Delegates shall consist of three members of the House of Delegates for the coming session of this Society, to which shall be referred all questions regarding the registration and credentials of the delegates.

Section 3.—The Reference Committee on Reports of Officers and Standing Committees shall consist of three members of the House and to it shall be submitted all reports of officers and committees, not otherwise specifically referred to other committees, for its consideration and recommendation before action may be taken by the House.

Section 4.—The Reference Committee on Scientific Business shall consist of three members of the House and to it shall be referred all new business of a scientific nature, not otherwise specifically referred to other committees before action may be taken by the House.

Section 5.—The Reference Committee on New Business shall consist of three members of the House and to it shall be referred resolutions introducing ordinary new business, not specifically referred to other committees, before action may be taken by the House. This committee is specially charged with all resolutions conveying the thanks of the Society.

Section 6.—The House of Delegates on recommendation of the Committee on Scientific Work may authorize special commissions to undertake scientific investigations during the interim between the meeting of the House of Delegates. Such commissions shall be automatically discharged unless specifically continued by the House of Delegates.

Section 7.—The Committee on Place of Meeting shall receive and consider invitations for the next annual session. It shall report its recommendations for action by the House of Delegates on the morning of the second day of the annual session. The report of this committee shall be the first order of business after the election of officers.

Chapter VIII.—County Societies

Section 1.—All county societies now in affiliation with this Society are component county medical societies. Those which may hereafter be organized in this state which shall have adopted principles of organization, not in conflict with this Constitution or these By-Laws, shall, on approval of the Censors of the district, become component parts of this Society. Only one component medical society from any one county shall be affiliated with this Society.

Section 2.—Remembering that the component county medical society is the only portal to this Society and the American Medical Association, in considering the qualifications of applicants for membership, using due diligence so that only reputable, registered physicians, citizens of the United States, may be admitted to membership, each component county medical society shall make formal inquiry regarding such applicants of the Biographic Department of the American Medical Association.

Section 3.—Any physician who may feel aggrieved by the action of a component county medical society in refusing him membership, or in suspending or expelling him, shall have the right to appeal to the Censors of the councilor district for their decision.

Section 4.—In hearing appeals the Censors may admit oral or written evidence, as in their judgment will best and most fairly present the facts; but in every appeal, efforts at conciliation and compromise shall, on the part of the individual Censors and of the Board, precede all such hearings.

Section 5.—When a member in good standing in any component county medical society moves to another county in this state, he shall, on request, be recommended by his society to the component county medical society into whose jurisdiction he moves, for election without the delay attendant upon ordinary applications for membership.

Section 6.—Any physician living near a county line may hold his membership in the county most convenient for him to attend, on permission of the Councilor of his district, but no physician shall at the same time hold membership in more than one component county medical society.

Section 7.—Each component society shall have general direction of the affairs of the profession in its county, and its influence shall be constantly exerted for bettering the scientific, moral and material condition of every physician in the county. Systematic efforts shall be made by each member, and by the society as a whole, to increase the membership until it includes every qualified physician in the county.

SECTION 8.—At some meeting at least sixty days in advance of the annual session of this Society, each component county medical society shall elect a delegate and two alternates to represent it in the House of Delegates of this Society, in the proportion of one delegate and two alternates to each one hundred of its members and for each fraction thereof in good standing on July 1st preceding the session. The Secretary of the component county medical society shall send a list of such delegates to the Secretary of this Society immediately after their election.

SECTION 9.—The Secretary of each component county medical society shall keep a roster of its members and of the nonaffiliated registered physicians of the county, in which shall be shown the full name, address, college and date of graduation, date of registration or license to practice in the state, and such other information as may be deemed necessary. In keeping such a roster, the secretary shall note any change in the personnel of the profession by death or by removal to or from the county, and in making his annual report he shall endeavor to account for every physician who has lived in the county during the year.

SECTION 10.—The secretary of each component county medical society shall remit to the Secretary of this Society, promptly upon receipt, the amount of the annual assessment of the members of his society, together with a copy of the receipt given to the members of his society. He shall promptly notify the Secretary of this Society, of any change of address of the members of his society, and of losses in membership, giving the cause, such as death (with date), resignation, transfer, removal (with present address), or expulsion. He shall upon request furnish the Secretary of this Society with a list of the officers and members of his county medical society, and shall report new members as soon as they are qualified as members of his society, remitting at the same time the amount of the member's annual assessment.

SECTION 11.—Each component county medical society shall notify the Secretary of this Society of any new By-Laws or rules that have been adopted, and furnish for publication in the JOURNAL of the State Society brief notes of its deceased members. Each component county medical society shall designate one of its members to act as reporter for the JOURNAL, who shall furnish such reports of the meetings of his society and such professional news as may be thought desirable for publication.

CHAPTER IX.—MISCELLANEOUS

SECTION 1.—No address or paper before this Society, except those of the President and invited guests, shall occupy more than fifteen minutes in its delivery. In the discussion of any papers, no member shall speak longer than five minutes, except by unanimous consent.

SECTION 2.—All papers read before this Society or any of the sections shall become the property of this Society. Each paper shall be deposited with the Secretary when read.

SECTION 3.—The deliberations of this Society shall be governed by parliamentary usage, as contained in Robert's Rules of Order, when not in conflict with this Constitution or these By-Laws.

SECTION 4.—The Principles of Medical Ethics of the American Medical Association shall govern the conduct of members in their relation to each other and to the public.

SECTION 5.—At each annual session, a public reception shall be provided as part of the program, in honor of the President of the Society. This function shall be under the direction of the Secretary and the Manager of Sessions and Exhibits, and shall be paid for by this Society.

SECTION 6.—Any vacancy occurring in an appointive office shall be filled at once by appointment by the President for the unexpired term.

Any vacancy occurring in an elective office, except in the case of the President-Elect, during the interim of the Annual Session, shall be filled by the Board of Trustees until the next regular session of the House of Delegates. In the case of death or inability to serve of the President-Elect the vacancy shall be filled at once by a special election by the House of Delegates.

CHAPTER X.—AMENDMENTS

These By-Laws may be amended at any annual session by unanimous consent, after lying over one day. If there be a dissenting voice, the amendment shall lie over for one year and take the course of amendments to the Constitution.

Dr. Adam J. Simpson moved that the House of Delegates adjourn, to reconvene at 9 a. m., Wednesday.

Motion seconded, and the House adjourned at 5:15 p. m.

IRA G. SHOEMAKER, *President.*
WALTER F. DONALDSON, *Secretary.*

Wednesday morning, October 13, 1926

The second meeting of the House of Delegates was called to order in the Junior Room of the Bellevue-Stratford Hotel, Philadelphia, Pa., on Wednesday, October 13, 1926, at 9:30 a. m., by the President, Dr. Harry W. Albertson.

DR. ALBERTSON: The meeting of the House of Delegates please come to order. You have chosen to put me in this position of presiding officer. I am free to admit to you that my ability as a parliamentarian is not of the best, and I have asked our good friend, long a member of this House, Dr. E. B. Heckel, to sit at my right. I will take kindly indeed anything that Dr. Heckel may suggest in regard to parliamentary ruling, and hope we may get along amicably.

The first order of business is a preliminary report of the Committee on Credentials.

Dr. Edith MacBride, chairman of the Committee on Credentials, reported that 102 members had registered. Following this the Secretary called the roll.

Dr. H. E. McGuire, Pittsburgh, president of the Allegheny County Society, reported that Dr. William H. Guy was unable to be present and that Dr. Frederick M. Jacob had been appointed to serve in his place in the absence of both alternates. Also that Dr. Willetts was unable to be present and that Dr. Charles H. Henninger had been appointed to serve in his place.

The Secretary announced that a quorum was present, and the President declared the House duly constituted for the transaction of business.

The Secretary read a summary of the minutes of the preceding meeting of the House of Delegates.

Dr. Hunsberger moved that the minutes be approved as read in abstract.

Motion seconded and carried.

THE PRESIDENT: The next order of business is the nomination of officers for the ensuing year, the first being for President-Elect.

Dr. Leonard G. Redding, of Scranton, nominated Dr. Arthur C. Morgan, Philadelphia.

The nomination was seconded by several, and upon motion duly seconded and carried, the Secretary cast the unanimous ballot of the House for Dr. Morgan.

The President declared Dr. Morgan duly elected.

The following gentlemen were nominated for the respective offices: First Vice-President, Dr. George A. Knowles, Philadelphia; Second Vice-President, Dr. C. C. Cracraft, Claysville; Third Vice-President, Dr. U. Grant Gifford, Kennett Square; Fourth Vice-President, Dr. George W. Reese, Shamokin.

Upon motion duly seconded and carried, the Secretary cast the unanimous ballot of the House for these four

Vice-Presidents, and the President declared them duly elected.

Dr. Carey J. Vaux, Pittsburgh, nominated Dr. Walter F. Donaldson to succeed himself as Secretary.

Upon motion duly seconded and carried, Dr. C. B. Longenecker cast the unanimous ballot of the House for Dr. Donaldson, and the President declared him duly elected.

THE PRESIDENT: If I may take a moment of your time, I wish to express my personal appreciation to this House of the work of our Secretary. I believe but few of you realize the amount of work involved. Our Society stands second to none in America—we will not take a back seat even for the American Medical Association so far as the Secretarial work is concerned. The work is done by Dr. Donaldson with a very scant amount of help in his office, I am sure most of you do not appreciate the service he is rendering to the Society. It has been my ambition, and I have expressed it to him, that some day he will devote his full time to the work of our Society. I believe we have in our Secretary a man who could mold public opinion, who could weld the Society into a unit, and do more for our organization than any single man in the State of Pennsylvania, and that is saying much. (Applause.) I shall pass on happily to my beyond if I can live to see Dr. Donaldson, or a man of his type, take charge of this work and carry on.

DR. DONALDSON: I am glad to have an opportunity to continue for another year in this office. I could not sit down after these kind words by our President without giving full credit for the work in the office of the Secretary to the heritage which was given me by the late Dr. C. L. Stevens of Athens when he passed on the torch to me in this very room in 1918. I shall be able to carry on the work only so long as I have the support of the officers of the component societies, the Board of Trustees, and our members throughout the State.

Dr. John W. Croskey, Philadelphia, nominated Dr. C. B. Longenecker, Philadelphia, to succeed himself as Assistant Secretary.

Upon motion duly seconded and carried, the Secretary cast the unanimous ballot of the House for Dr. Longenecker, and the President declared him duly elected.

Dr. John M. Quigley, Clearfield, nominated Dr. John B. Lowman, Johnstown, to succeed himself as Treasurer.

Upon motion duly seconded and carried, the Secretary cast the unanimous ballot of the House for Dr. Lowman, and the President declared him duly elected.

The following gentlemen were nominated as Trustees and Councilors for a term of five years for the respective districts: Second (new number) District, Dr. W. T. Sharpless, West Chester; Eighth District, Dr. Harry W. Mitchell, Warren; Eleventh (newly created) District, Dr. Arthur E. Crow, Uniontown.

Upon motion duly seconded and carried, the Secretary cast the unanimous ballot of the House for these three gentlemen, and the President declared them duly elected.

THE PRESIDENT: The next order of business is the election of delegates from the Medical Society of Pennsylvania to the American Medical Association, for a term of two years. There are to be three delegates, three alternates, and three alternates-at-large. The duty of the Committee on Society Comity and Policy is to furnish the House the names of suitable men for these offices, and I shall ask the Secretary to present the report of that committee.

The Secretary then presented the following nominating report:

Delegates: Walter F. Donaldson, Pittsburgh; Samuel P. Mengel, Wilkes-Barre; J. Norman Henry, Philadelphia.

Alternates Designate: Donald Guthrie, Sayre; Frank P. Lytle, Birdsboro; W. D. Martin, Dunn's Station.

Alternates-at-Large: S. J. Waterworth, Clearfield; Frank G. Runyeon, Reading; J. B. McAlister, Harrisburg.

Upon motion of Dr. Mayer, seconded by Dr. Quigley and carried, the Secretary cast the unanimous ballot of the House for these gentlemen, and the President declared them duly elected.

THE PRESIDENT: The next order of business is the election of district censors. The Secretary has the nomination of each of the sixty-three county societies. I will not ask him to read them, but as a matter of form I wish to entertain a motion to elect these various gentlemen as censors of their districts.

Upon motion of Dr. John W. Croskey, Philadelphia, duly seconded and carried, the Secretary cast the unanimous ballot of the House for the following, and the President declared them duly elected:

DISTRICT CENSORS

First Councilor District.—Philadelphia County, Frank White, Philadelphia.

Second Councilor District.—Berks County, C. W. Bachman, Reading; Bucks County, William C. Moyer, Quakertown; Chester County, U. G. Gifford, Kennett Square; Delaware County, J. Harvey Fronfield, Media; Montgomery County, John T. MacDonald, Norristown; Schuylkill County, James A. Lessig, Schuylkill Haven.

Third Councilor District.—Carbon County, Wilson P. Long, Weatherly; Lackawanna County, Charles B. Noecker, Scranton; Lehigh County, George F. Seiberling, Allentown; Luzerne County, John E. Scheifly, Kingston; Monroe County, J. Anson Singer, East Stroudsburg; Northampton County, William P. O. Thomason, Easton; Wayne County, Fred W. Powell, Honesdale.

Fourth Councilor District.—Bradford County, Daniel L. Bevan LeRoy; Columbia County, James R. Montgomery, Bloomsburg; Montour County, Horace V. Pike, Danville; Northumberland County, Charles M. Thomas, Sunbury; Susquehanna County, William J. Condon, Susquehanna; Snyder County, Percival Herman, Selinsgrove; Sullivan County, Martin E. Herrmann, Dushore; Wyoming County, W. W. Lazarus, Tunkhannock.

Fifth Councilor District.—Adams County, T. C. Miller, Abbottstown; Cumberland County, R. M. Shepler, Carlisle; Dauphin County, Hiram McGowan, Harrisburg; Franklin County, A. Barr Snively, Waynesboro; Lancaster County, Walter Leaman, Lancaster; Lebanon County, W. M. Guilford, Lebanon; York County, L. S. Weaver, York.

Sixth Councilor District.—Blair County, W. A. Nason, Roaring Spring; Center County, J. L. Seibert, Bellefonte; Clearfield County, G. W. Gann, Duhois; Huntingdon County, William H. Sears Huntingdon; Juniata County, B. H. Ritter, McCoysville; Mifflin County, F. A. Rupp, Lewistown; Perry County, L. A. Carl, Newport.

Seventh Councilor District.—Clinton County, John B. Critchfield, Lock Haven; Elk County, J. C. McAllister, Ridgway; Potter County, John Page, Austin; Tioga County, F. H. Shaw, Wellsboro; Lycoming County, Edward Lyon, Williamsport; Union County, Charles H. Dimm, Mifflinburg.

Eighth Councilor District.—Crawford County, William E. Hyskell, Meadville; Erie County, F. S. Shubert, Erie; Mercer County, George W. Kennedy, Sharon; McKean County, B. H. Hall, Bradford; Warren County, C. S. Brown, Warren.

Ninth Councilor District.—Armstrong County, Thomas N. McKee, Kittanning; Butler County, W. A. McCall, Butler; Clarion County, B. P. Walker, West Monterey; Indiana County, Charles E. Rink, Indiana; Jefferson County, S. M. Free, DuBois; Venango County, J. P. Strayer, Oil City.

Tenth Councilor District.—Allegheny County, J. J. Johnston, Pittsburgh; Beaver County, J. B. Miller, New Brighton; Lawrence County, C. F. McDowell, New Castle; Westmoreland County, B. R. Smith, Jeannette.

Eleventh Councilor District.—Bedford County, Walter F. Enfield, Bedford; Cambria County, H. F. Tomb, Johnstown; Fayette County, C. H. LaClair, Uniontown; Greene County, T. N. Millikin, Waynesburg; Somerset County, George A. Noon, Listie; Washington County, L. D. Sargent, Washington.

The President appointed Drs. Campbell and Womer to escort Dr. Arthur C. Morgan, President-Elect, to the Chair.

DR. ALBERTSON: Dr. Morgan, this election confers on you great responsibility. I realize fully what you are expected to do, and your ability to fill the office.

It is my great pleasure to pin upon you this badge of the office of President-Elect of the Medical Society of the State of Pennsylvania. It gives me great pleasure to present to this House of Delegates the President-Elect of the Society for the ensuing year, Dr. Arthur C. Morgan, of Philadelphia.

DR. MORGAN, in accepting, said: Mr. President, and fellow members: This is indeed a great responsibility and a great honor. Few are given the call to serve, and I pledge you to serve our organization to the best of my ability, the Lord helping me.

THE PRESIDENT: I will now entertain the report of the Committee on Place of Meeting.

Dr. Charles A. E. Codman, chairman, announced that two invitations had been received for the 1927 meeting, one from Scranton, and one from Pittsburgh, and that the Committee wished to have the decision left to the House.

Upon motion of Dr. John M. Quigley, duly seconded and carried, Pittsburgh was selected as the meeting place for 1927.

The President asked the permission of the House to introduce a matter of new business at this time. This permission being granted, the Secretary presented the following resolution:

WHEREAS, It is the purpose to stimulate a state-wide enthusiasm relative to annual State Society meetings, and

WHEREAS, In order to facilitate this purpose, we feel that if the meetings were held in some of the smaller as well as the larger cities of this State, it would bring about a more appreciative feeling of responsibility and enthusiasm than has heretofore been manifested; therefore, be it

Resolved, That the State Society meetings be held in the smaller as well as the larger cities, of the State, and that all expenses, other than social, be met by the General State Treasury.

(Signed) GEORGE A. KNOWLES,
SETH A. BRUMM,
FRED S. BALDI,
MOSES BEHREND.

The President referred this to the Committee on New Business.

There being no further new business, the President called for the report of the Committee on Reports of Officers and Standing Committees.

Dr. Carey J. Vaux, chairman, presented the following report, which was voted upon section by section, and then upon motion of Dr. William H. Mayer, duly seconded and carried, was adopted as a whole:

The Reference Committee on Reports of Officers and Standing Committees moves the receipt and entry of the following reports on the minutes of this Society: Report of the Chairman of the Board of Trustees; of the Individual Councilors; of the Committee on Public Health Legislation; of the Committee on Public Relations; of the Committee on Society Comity and Policy; of the Committee on Medical Benevolence; of the Committee on Promotion of Efficient Laws on Insanity; of the Committee on Conservation of Vision; of the Commission on Cancer; of the Committee on Medical Research; of the Committee on Archives; of the delegate to the Pennsylvania Pharmacy Association, Dr. S. D. Shull. The Committee also moves that a vote of thanks be given all of the members responsible for the above reports for their valued services to the Society, and that all of the Committees be continued.

Report of Delegates to the 1926 Session of the American Medical Association. Dr. Walter F. Donaldson, Secretary, reports the approval by the House of Delegates of the following resolution: "Recommending the modification of the present curriculum for the training of nurses, reducing the course for registered nurses to two years, permitting an additional year of training, and the granting of an appropriate degree for students wishing to qualify for work of a more or less supervisory character." The Reference Committee moves concurrence in approval of the above resolution by the House of Delegates of the American Medical Association.

Report of the Secretary. Dr. Donaldson reports the loss by death of 118 members during the past year. It appears that no cognizance of the loss of a member by death is taken in the State Society, which is contrary to the attitude of at least some of the county societies. The Reference Committee believes that either the State Society or the county society should take some definite, proper action on the death of each member, and therefore moves that the President appoint a committee of five members to study the subject and report in full to the Society at its next meeting, with a recommendation as to what in its judgment would be the most desirable action to take, either by the State Society or county societies.

Report of the Treasurer. Dr. Lowman's report shows the Society to be in a healthy financial condition.

There has been referred to the Reference Committee an appropriate resolution, signed by Drs. Codman and Petty, to which is attached a petition signed by about 140 members of the Society. The purport of this resolution is the creation of a Section on Urology in the Medical Society of the State of Pennsylvania. The Reference Committee moves the adoption of this resolution.

The President's Address. Dr. Albertson, in presenting his initial formal address to the Society, stresses very strongly three distinct items of great interest to the medical profession, and recommends very definite lines of action for the Society as a whole and for its individual members. The Reference Committee presents these three items as follows:

1. The desirability of change in legislation, whereby the health interests of the people of Pennsylvania will be better safeguarded by licensing to practice the healing art only those who have had proper education and training. The fine report of Drs. Henry and Appel, presented to the House of Delegates, upon which favorable action was taken Monday, seems to the Reference Committee to be the beginning of a proper solution of this problem. This Committee strongly urges all members of the Society to "get behind" the movement and the proper officers of the Society to begin the campaign of education and appeal to our members at the earliest possible moment.

2. Dr. Albertson stresses the great need of true medical education to lay people. Dr. Wendell C. Phillips in his address at our opening General Session laid the greatest stress on the vital importance of this activity. The economic value of publicity has been recognized by all cults and isms of false medical practice, and they are now using every available avenue to spread their false teachings. Every physician recognizes the fact that false medical systems have come and gone since the beginning of medical history, and that none of them can ever have any great length of life because of the exact truth in that very old truism, "No human institution can have any real permanency unless it renders true service to humanity," and all physicians know that these false systems do not, and cannot, render anything but disservice to the people. However, all physicians also know there is an atom of truth incorporated in the great mass of falsehood in all cults and isms; were it not so, as Voltaire says, these false teachers could gain no converts outside of Bedlam, and would therefore never become dangerous to society. The medical profession must step into the breach and teach the truth to the people, or become derelict in its

duty to the people and abandon the field to the falsehoods and misinformation of the cults. The Reference Committee moves that a Committee of five members, plus the Secretary, be appointed to take up and carry through a proper educational campaign, and to work in close coöperation with the county medical societies.

3. Dr. Albertson's recommendation regarding the closed hospital staff situation is noted. It is the sense of the Reference Committee that this situation is a growing liability on the optimum of medical service to the people, and on at least three counts it is now rendering disservice distinctly harmful to the medical profession and to the general public: (a) It eliminates proper contact of the patient with his physician of choice, which should be the fundamental privilege of the patient, so long as our commonwealth does not adopt some system of state medicine. (b) It deprives the majority of physicians of the facilities that are publicly supported and necessary, frequently, in the proper treatment of their patients. (c) It automatically eliminates the great majority of the medical profession from a close and intimate medical association that is absolutely necessary in the continued medical education and experience of any physician, in order that he may render the best possible service to his patients. It is therefore not only harmful to the excluded physician, but harmful to the people he treats, as they are deprived of benefits accruing to the growing medical knowledge and experience of their medical adviser. That the situation is complex is recognized by your Committee. That the present situation can be corrected in a fair and just manner to all concerned is the belief of your Committee. We, therefore, advise that a special committee of five be appointed to study the subject from all points of view, to report in detail at the annual meeting in 1927, and to recommend to the House of Delegates a plan which, in the opinion of the special committee, will correct or modify the existing closed hospital staff situation in such a manner as to provide proper contact of the physician with his patient after hospitalization, and permit an acceptable, intimate, and continued professional association with hospitals for the now excluded physicians, in the interest of their increased medical knowledge and experience.

(Signed) Carey J. Vaux, *Chairman,*
Henry G. Munson,
George A. Clark.

The President: I wish now to thank the Committee for the very efficient manner in which they have handled their work. If I have been instrumental in bringing before you something that will be of value in the future, particularly to the young man who must enter the profession and fight his way up, I shall feel that I have accomplished something worth while.

Report of the Reference Committee on Scientific Business

Dr. Adam J. Simpson, chairman, presented the following report:

The committee feels that there is no branch of medicine that has had as much investigation as that of bacteriology and laboratory work in general. This is checked up in various ways, and it is controlled absolutely in the State by the Board of Medical Education and Licensure. In every hospital where there is a laboratory and the chiefs are at all aware of conditions, they keep a close check on their laboratory work. The American Medical Association has about the same sort of procedure. The report to this Society is about the same as that submitted to the American Medical Association. Therefore, your committee reports favorably, and recommends the continuation of the Committee on Laboratories, and that it be given power to refer for approval qualified clinical laboratories in the state of Pennsylvania to the Council on Medical Education and Hospitals of the American Medical Association.

We recommend that the Commission to Confer With Secretaries of Health and Welfare be continued.

Regarding the Commission to Study Quarantine Laws, your Committee feels that the psychological impression upon the public mind of quarantining certain contagious diseases without placarding is confusing. Therefore, the committee recommends the adoption of the minority report.

In reference to the question of the State of Pennsylvania furnishing radium for the free treatment of cancer, as it is well known that specially endowed institutions exist in several parts of the State where free treatment with radium can be obtained, and as Dr. Potter of the State Department of Welfare is of the opinion that it is not a function of the State to supply radium; and furthermore, as no instance has been brought to our attention of a patient's not receiving radium on account of lack of funds, the Committee feels that the Medical Society of the State of Pennsylvania should take no action at this time.

(Signed) Adam J. Simpson, *Chairman,*
Orlando H. Petty,
John A. Campbell.

This report was first adopted section by section, and then, upon motion, duly seconded and carried, was adopted as a whole.

The President: I also wish to thank this Committee for the very efficient manner in which they have functioned.

Report of Reference Committee on New Business

Dr. J. Newton Hunsberger, Norristown, chairman, presented the following report:

The Reference Committee on New Business has had six items referred to it by the House of Delegates, and begs to submit the following report:

First. We recommend that the communication from the management of the Bellevue-Stratford to Dr. George A. Knowles, Chairman of the Local Committee on Arrangements, be received and filed, and that the Secretary be instructed to acknowledge the letter, thanking them for their courtesy.

Dr. Knowles moved the adoption of this section of the report.

Motion seconded and carried.

Second. We recommend the endorsement of the efforts of the Medical Society of Virginia to honor the memory of Walter Reed, and present the following as the action of your Reference Committee: *Resolved,* that the President of this Society be authorized to appoint a committee of ten to assist in this undertaking.

Upon motion duly seconded and carried, this section of the report was adopted.

Third. We recommend that the Board of Trustees be constituted a Committee on Disaster, with authority and power to appropriate such funds and direct such action as they deem wise in any emergency.

Upon motion of Dr. Appel, duly seconded and carried, this section of the report was adopted.

Fourth. We have considered the communication from the Medical Society of South Dakota. While we appreciate the condition set forth in this communi-

cation, we believe that the matter is a question which should be placed in the hands of the Department of Health of this State, they to confer in any action they desire to take in the matter with the Department of Public Instruction of Pennsylvania, and would recommend that this communication be referred to the Department of Public Health for action.

Upon motion of Dr. Mayer, duly seconded and carried, this section of the report was adopted.

Fifth. We recommend the approval of the report of the Committee on Compensation Laws as printed in the September ATLANTIC MEDICAL JOURNAL, and in addition the supplemental report presented through President Ira G. Shoemaker, at this session.

Upon motion duly seconded and carried this section of the report was adopted.

Sixth. As to the resolution regarding the payment of annual session expenses by the State Society, since the State Society pays all of the expenses in connection with the annual meeting, except social entertainment arranged by the society or societies acting as host, we therefore return the communication with a favorable recommendation, and move its adoption.

Motion seconded, and after some discussion by Drs. Knowles, Shoemaker, Hartman, Albertson, and Pfaltzgraff, put to a standing vote and lost.

The President expressed his thanks to the committee for their efficient work.

THE PRESIDENT: I hoped from the presidential address that something would be done toward the recognition of the Tristate Conference. As you recall, I made certain recommendations in this regard. To me it seems quite important. Dr. Shoemaker has called my attention to this, and I will ask him to explain and make some recommendation.

DR. IRA G. SHOEMAKER: You will recall that I stated in my address to the House that the Tristate Conference had invited a committee from our Society to meet with them. We have had three meetings and a permanent organization has been formed, although none of the committees have been officially recognized. It was apparent that much good was brought out of the conferences, and Dr. Albertson and I feel that they should be recognized by our Society in an official way; in other words, that we should sanction these conferences and bear our part of the expenses when necessary.

I move you, sir, that the House of Delegates officially recognize the Tristate Conference composed of the officers of the medical societies of the States of New York, New Jersey, and Pennsylvania, and that such incidental expenses as may be incurred, as the traveling expenses of the representatives of our Society, and other incidental expenses of the Conference when it meets in our State, be met by the Society.

Motion seconded by Dr. Vaux and unanimously carried.

THE PRESIDENT: We feel that much good will come from such meetings of our officers, including the President, President-Elect, Chairman of the Board of Trustees, and others from this State, with the representatives of other societies. I have learned a great deal at the two meetings I have had the pleasure of attending, and I am sure it will be an entering wedge toward the expansion of our monthly publication in these three states, not at present, but later on.

DR. BRENHOLTZ: I should like to present to the House from the Board of Trustees the recommendation that the annual dues for 1927 be $5, and that the allotment be 10c to the Medical Defense Fund, and 65c to the Medical Benevolence Fund.

On motion duly seconded and carried this recommendation was unanimously adopted.

Dr. John M. Quigley asked for permission to revert to new business, and upon receiving this permission moved that the Committee on Revision of By-Laws be continued.

Motion seconded and unanimously carried.

As this completed the business before the House, on motion duly made and seconded, the House of Delegates adjourned at 11:30 a. m., to reconvene at the call of the President.

HARRY W. ALBERTSON, *President,*
WALTER F. DONALDSON, *Secretary.*

MINUTES OF THE GENERAL MEETING

Tuesday, October 12, 1926

The first General Meeting of the Seventy-sixth Annual Session of the Medical Society of the State of Pennsylvania was called to order in the Ballroom of the Bellevue-Stratford Hotel, Philadelphia, on October 12, 1926, at 10:20 a. m., Dr. Ira G. Shoemaker of Reading, presiding.

THE PRESIDENT: The meeting will be opened by an invocation by the Right Reverend Thomas J. Garland.

THE RIGHT REVEREND THOMAS J. GARLAND, D.D., Bishop of the Diocese of Pennsylvania: Our Heavenly Father, be with us at this conference of the Medical Society of the State of Pennsylvania; guide our deliberations for the advancement of knowledge and the amelioration of suffering and the preservation and increase of health. Give grace to every member of this noble profession, so that they may preserve the highest ideals of their vocation as in their life service they minister to the needs of others. Grant that in their ministry to humanity they may find their service to God and country, through Jesus Christ our Lord. Amen.

THE PRESIDENT: Because of circumstances over which we have no control, it will be necessary to change the order of the program slightly. To the medical men the next speaker does not need any introduction. His activities in the Society for many years have made him a well-known personage. I deem it a great pleasure to present to you Dr. Moses Behrend, President of the Philadelphia County Medical Society.

DR. BEHREND: As President of the Philadelphia County Medical Society, I wish to extend a most hearty welcome to the members of the Medical Society of the State of Pennsylvania in its seventy-sixth annual session. Philadelphia felt itself greatly honored when the House of Delegates voted to bring this meeting to our city in the year when we celebrate our hundred and fifty years of freedom. We have not taken the task of being your hosts lightly, because the responsibility placed upon the Committee on Arrangements, of which Dr. George A. Knowles is Chairman, has been great. We want you to feel at home in our City of Brotherly Love, noted for its hospitality and good fellowship.

You have heard and read much about the new home of the Philadelphia County Medical Society through the ATLANTIC MEDICAL JOURNAL and the *Journal of the American Medical Association* and our own *Weekly Roster.* We want you to feel that it is your home as well as ours. Use it as though it were your own county building. We shall have open house the entire week. Meals will be served there to members and their ladies and friends at very moderate prices. We

advocate and predict that every county society of sufficient size will have a home of its own in the near future. This is not the place to enumerate all of its advantages, but these are obvious to those who have followed our program for the year.

As a token of esteem and good fellowship, Mr. President, I want to present to you the key of our County Medical Society Building, and hope that you and all the members of the Medical Society of the State of Pennsylvania will use it to the fullest advantage. We also hope that this session will be remembered by all as one of the most profitable, as well as one of the most enjoyable.

The President: Our very successful program for a number of years has been the product of an active committee presided over by one whose personality and untiring efforts have been a great factor. I am glad to present Dr. Thomas G. Simonton of Pittsburgh, Chairman of the Committee on Scientific Work.

Dr. Simonton: After consultation, it has been decided that on account of the American Legion parade this afternoon, the scientific meetings set for two o'clock will be postponed until three.

This year we have a little different form of program. We have provided one clinic in each section. The section on Pediatrics and the Section on Eye, Ear, Nose and Throat Diseases will have clinics this afternoon; the Medical Section on Wednesday afternoon; and the Surgical Section on Thursday morning. At the Philadelphia General Hospital the seating capacity of the auditorium is four hundred.

We hope the members will attend promptly at the hours appointed. A number of noted speakers will be guests of the Society and will speak at the appointed time, as published in the program.

A word about the clinics. The Section officers will preside, and Philadelphia members on the hospital staff will conduct the clinics. Twenty minutes will be allowed for the presentation of a case. All the laboratory data, the blood pressure, the blood chemistry, etc., will be screened by means of a radioscope, so that the man who is presenting the case will not have to consume any time in recounting such data. The reporter will take notes of all cases for publication in the Journal.

We have a wonderful commercial exhibit this year. These exhibitors pay quite a sum for the privilege of exhibiting thereby helping to defray the expenses of our annual meeting. It is the hope of the exhibitors that they may come in contact with as many members of the Society as possible. From their viewpoint this makes a successful meeting. If you give twenty minutes of the next three days to a review of the exhibits, you will help the exhibitors, and the firms they represent will be pleased.

The President: The next speaker needs no introduction, as he is the most photographed man in the country. It is impossible to pick up a paper without seeing his smiling face. For the last year his chief diversion has been to give the freedom of this city to various conventions, to tell them how welcome they are, and especially to urge them to visit the Sesqui-Centennial—*his* Sesqui-Centennial. I am glad to present to you the Honorable W. Freeland Kendrick, Mayor of the City of Philadelphia.

The Honorable W. Freeland Kendrick, Mayor, City of Philadelphia: I am very grateful to Dr. Shoemaker for his kindly introduction, and I am willing to admit the charges that he has made, because for the last six months at least I have been very busy extending cordial welcomes to the various conventions that have met in this, the foremost American city, and I come here this morning to extend to the Medical Society of the State of Pennsylvania one more warm, cordial welcome from the two million citizens of Philadelphia that I have the honor to represent.

I should like to speak to you now for a couple of moments on a subject that perhaps will be more interesting to you than the welcome which you are assured comes from the bottom of sincere hearts. I want to refer to one of the great accomplishments of the present administration in the municipality of Philadelphia.

We promised the erection of a Philadelphia General Hospital that would offer medical service to the poor man equivalent to any service that could be rendered in the great established hospitals of our city and state. First, we built two million dollars worth of buildings in which we located the insane and the indigent. Now we are tearing down the almshouse and the old ramshackle Philadelphia General Hospital on the west bank of the Schuylkill River, and we are erecting there a six-million-dollar institution, which will need added funds for its equipment, that we believe will be one of the outstanding hospitals in the country, and surely one of the most satisfactory accomplishments of my administration as Mayor of the City of Philadelphia.

I am not a stranger to hospital work, and have long realized the great necessity for this Philadelphia General Hospital because some years ago Mrs. Kendrick and I became interested in crippled children. Having no children of our own, we were attracted to a home for incurables at forty-eighth and Woodland Avenue, Philadelphia. In the back yard of the institution is a little children's house, where they have fifty broken pieces of humanity who are living a life of pain and uselessness. For many years we visited there and to a certain extent mothered and fathered those children. In the meantime, I was proceeding through the chairs of a great fraternal organization which seemed to have no goal or particular ambition which would give it a reason for existing, but when the matter was presented to them the 600,000 members of that order agreed to an annual contribution of two dollars each, which made a yield of a million and a quarter annually. This has been collected each year and we are building or operating fifteen orthopedic hospitals in all sections of North America. We take the destitute crippled child, regardless of race, color, or religion. The child that is able to pay for orthopedic surgery cannot be admitted into these mercy houses that 600,000 men in the United States and Canada are financing, and in which the greatest orthopedic surgeons in this country are acting as an advisory board, and assisting us in developing the work.

So, in conclusion, and without the usual reference to the welcome from Billy Penn at the City Hall, without assurance of a hearty welcome from the Liberty Bell, "whose voice when it trembles is heard round the world," without reminding you that Philadelphia has made a contribution to the state, to the nation, and to the world, of the greatest international exposition that has ever been held, because this is the anniversary of the birth of our glorious nation, which happened within the historical walls of this city a century and a half ago—without any of that, let me assure you of a hearty welcome as Mayor of the City of Philadelphia, and personally, as a citizen, to men who mean much in the future of the state and the nation, to men and women who are hearing the call of humanity, who are ministering to the sick, who

are building character for the future, that should mean much in the lives of the people of our nation. Welcome, thrice welcome! May your deliberations be inspiring and satisfactory, may you carry home with you a kindly impression, not only of the greatness of the city of Philadelphia, but of the sincere hospitality of its citizenship.

THE PRESIDENT: The scientific exhibit has become a feature of our convention. The chairman, Dr. Fred D. Weidman, of Philadelphia, will tell us about it.

DR. WEIDMAN: In advance I want to say that I am not going to tell you all about it, because it cannot be done. It is the consensus of opinion of your officers that heretofore the scientific exhibit has not had quite the personal touch that it should have, so this year we have accordingly undertaken a new plan and the exhibit has been built around the policy of a postgraduate course of instruction in miniature. I cannot tell you at this time everything about it, but it has been fully advertised in the program and in the JOURNAL. The point I wish to emphasize is that we have arranged for person-to-person conferences. For instance, Dr. P. F. Leake, of the United Public Health Service, will demonstrate vaccination. He will show the test for smallpox immunity. He will also have patients upon whom he will demonstrate the intricacies of the smallpox reaction. Mr. F. L. Wright, Jr., will demonstrate the technic of the hemoglobin determinations, and will be in position to determine on any subject his hemoglobin figure.

This plan is an experiment. Your officers and committee have gone to a great deal of trouble, and hope for your coöperation and that the individual exhibitors may feel rewarded for their trouble in preparation. It is a real problem to get patients to come to an exhibit like this. The system is on trial, and this body of men is the index. We ask you to visit these scientific exhibits, and if it happens that one or two of the demonstrators are not present, remember they may have to make a few professional calls around the city, but it is the plan that all these exhibitors shall be present at least part of the time for these person-to-person demonstrations. We look to you to determine whether we shall have this form of exhibit in the future. We hope that you will take home much from this exhibit and at the same time that you will encourage the exhibitors to work in the same direction for future meetings.

At this time Dr. George A. Knowles, Chairman of the General Committee on Arrangements called attention to published announcements in regard to social entertainments, and introduced Mrs. William E. Parke, Chairman of the Committee on Entertainment for Visiting Ladies.

THE PRESIDENT: We are honored today by having with us delegates from neighboring societies and allied professions. It is well known that isolation breeds selfishness, while association produces unselfishness. We therefore welcome the strangers who have come to bring greetings, and assure them that we are glad to have them with us. We have with us, representing the Medical Society of the District of Columbia, Dr. John Foote of Washington, D. C.

DR. JOHN FOOTE: In the year 1817, 109 years ago, President Monroe took his oath of office, not in the Capitol, but amid the blackened ruins of the building which had been burned in the invasion during the second war with Great Britain. There were many problems confronting him. There was the reconstruction problem, there was disaffection among the people of New England, there was the Indian War, and in the South there was the slavery problem. Later there was the Missouri compromise in the West and South, and many other things to come before Congress; but among the things that came to the President and to the Congress was a petition from a number of physicians of the District of Columbia, who asked that an association of physicians be incorporated to be known as the Medical Society of the District of Columbia, and a charter was issued under the seal of the United States bearing the name of President Monroe. It is a great satisfaction, of course, to belong to a society that has such an historical origin, and we may feel a certain pride in having that charter; but had it not been for a certain other meeting which took place in this City of Philadelphia, a hundred and fifty years ago, the power conferred with that charter would not exist, because there would be no President of the United States and no Congress.

And so the Medical Society of the District of Columbia feels honored, as well as pleased, in being invited to send a representative to this great state medical organization on this particular occasion of the 150th anniversary of the birth of this Republic. Independence Hall is frequently alluded to as the Cradle of Liberty, but we physicians should at least appreciate that the City of Philadelphia is the lying-in room of liberty, because here the infant Republic was delivered, with considerable dystocia and a regrettable amount of blood letting, and there is therefore a bond between the city of Philadelphia and the District of Columbia, an historical bond existing between the medical profession of these two communities.

There is an old English saying that "He who boasts of his ancestry is like a potato plant, because the best part of him is under ground." Bearing this in mind, and realizing fully the application of that quotation, let me say that my best qualification for appearing here today as a delegate from Washington lies in the fact that I am a native of the state of Pennsylvania, and that my father was a pioneer physician of the Lackawanna Valley, a physician, who, many, many years ago, prized his membership in the Lackawanna County Medical Society to such an extent that he found it easy to drive a horse and buggy twenty-four miles—twelve miles each way—to the city of Scranton on roads that we should today consider impassable, in order to attend meetings and take part in the discussion of papers. That is the spirit, ladies and gentlemen, that has made possible the upbuilding of a great organization such as you have today. There are no hereditary memberships in medical societies, but there can be an hereditary interest, and I am very proud because I come of stock that was interested in medicine long years ago.

It is a great joy to be here, to see this magnificent gathering, and to hear something of what your Society has accomplished. On behalf of the Medical Society of the District of Columbia, I bring you greetings and fraternal good wishes. I also bring you a special message from the President and the Executive Committee of that Society, who have instructed me to tell you that you are all invited to be our guests in Washington next May, at what promises to be the greatest and most successful meeting ever held by the American Medical Association.

THE PRESIDENT: The Medical Society of the State of New Jersey sends back to our annual meeting one of our boys, Dr. W. Blair Stewart, of Atlantic City, N. J.

DR. STEWART: It is almost like coming back home to come before you. I bring the greetings of the

Medical Society of New Jersey, its President, and members, and wish you every happiness and success in your meetings. As I have told you before, the Medical Society of New Jersey is the pioneer, the parent medical organization in the United States, and we have great pride in that. We in New Jersey have tried to do our little part as an association in the upbuilding of the tenets of the profession. Possibly the most outstanding factor of the work in the past year in New Jersey has been that of reconstruction. We, like you, realize the fact that today is the day of the young man, who is coming into his own, taking his place, and doing the things that we did not do and could not do until we reached older years.

Mr. President, may I refer again to a little suburban village not far from Philadelphia, to which you and all members of this Society are welcome. I refer to Atlantic City, the queen seashore resort of the world, and the place where all of you have been sending your patients for recuperation. May I suggest that when you have finished your work in this medical organization, after you have visited the clinics, you will need rest and recuperation before you return to your homes, and you should therefore come to Atlantic City. I did not bring the key with me, but I am prepared to say that if you meet the Mayor of Atlantic City he will present you a key that is larger than the one received by your President today, a key that will open to you and to all members of the Society the beauties and pleasures and glories of the sea air that you cannot find anywhere else outside of Atlantic City.

I congratulate you, Mr. President and old schoolmate, on having attained the position you have, and also on the good work that you have done in the past year. I know your successor will have to move rapidly if he intends to keep up the pace that you have set.

THE PRESIDENT: The Medical Society of West Virginia has sent us an old friend, Dr. Henri P. Linsz, of Wheeling, West Virginia.

DR. LINSZ: Last year I represented West Virginia at your 75th anniversary, and I said at that time that I hoped to help celebrate your 100th. That will be in only twenty-four years from now. It is with pardonable pride that I am privileged once more to present the felicitations of another medical society to this great organization. We have the greatest esteem and admiration for the enterprise and integrity and efforts of this great Society, for your achievements, for the soundness of your high ideals, and for the excellence of your institutions of learning and your hospitals. At its birth, Pennsylvania was christened the "Keystone State" on account of its geographical position, and Pennsylvania is also the keystone of medical education, and the Pennsylvania State Medical Society commands the same recognition. We all endeavor to follow your example and proceed along the same lines you are, working to the same end. To be chosen to express the greetings of West Virginia to Pennsylvania, is an honor of which I am justly proud.

THE PRESIDENT: The Pennsylvania State Dental Society has sent to us Dr. Emerson R. Sausser, of Philadelphia.

DR. SAUSSER: It is indeed a real honor to be delegated to give to the Medical Society of the State of Pennsylvania the cordial greetings of the Pennsylvania State Dental Society, and to wish you success in this meeting and a new year full of added accomplishments. It was a courteous act on the part of your Society to inaugurate a few years back this interchange of greetings between these two professions. I feel that I speak the mind of every member of our profession in Pennsylvania when I say that we have already felt an added coöperation between the medical and dental professions in public-health work throughout the state. In 1920 one of the members of your Society, Commissioner of Health Martin, inaugurated a movement for healthier mouths in Pennsylvania. He asked Dr. Clark Hollister to call a conference between the Health Department and Pennsylvania State Dental Society. This was done, and today Pennsylvania has the most effective and practical mouth-hygiene program of any state in the Union. We have in Pennsylvania a society that is fifty-seven years old. It comprises, from the 4,200 dentists in the state, about 2,500 members. These 4,200 dentists represent one tenth of the dentists in the United States. Within our borders are three dental schools from which are graduated one sixth of the annual output of all the educational institutions in dentistry throughout the country.

We have a problem in Pennsylvania that requires the added coöperation of every member of the medical profession in our state. You men of course realize the tremendous influence your opinion has with the community. We have divided the state of Pennsylvania into nine zones. In each zone is a lieutenant authorized by the State Health Department to carry on health work along lines of mouth hygiene, and under him are appointed a number of zone captains. We find that in five years' time in Pennsylvania there are more communities with community dental service than in any other state in the Union, and in every community much of the success of putting over this program has been due to the enthusiastic support of the individual members of the medical profession and to the whole-hearted support of the State Health Department.

In closing, I have been asked to thank you for your coöperation, and to ask also that this course be continued and that some practical plan along prescribed lines, working through the Health Department, as it relates to preventive medicine, be sometime considered by your Society.

THE PRESIDENT: The Pennsylvania Pharmaceutical Association has assigned Mr. W. L. Cliffe, of Philadelphia, to present the greetings of that organization.

MR. CLIFFE: It is a great privilege and honor to appear before you on this occasion to extend the cordial greetings of the Pennsylvania Pharmaceutical Association. We are celebrating next year our semicentennial, and as a means of properly doing that we have established a permanent office in Harrisburg. We are glad to extend to you the use of that office for coöperation in the various ethical problems common to the two societies. We assure you that your Conference Committee which meets with a committee of the Pennsylvania Pharmaceutical Association will meet with coöperation at all times. We wish you a successful meeting.

The following letter from Dr. W. W. Keen of Philadelphia was presented:

October 9, 1926.

Dear Doctor:

I have to go on to the annual meeting of the Corporation of Brown University (I have been a member of it for over fifty-three years) on Tuesday, and have so much crowded into Monday that I cannot possibly attend any of the State Society meetings. I shall be back on Thursday, but that day is already crowded with more than I can do. Please say to my many friends and old students how much I regret my inability to meet them. I wish all success to the State Society.

Very truly yours,
(Signed) W. W. KEEN.

Dr. Keen was graduated from Jefferson Medical College in 1862 and has for more than sixty years been a member of our Society.

DR. FRANK C. HAMMOND, Philadelphia, Pa.: One of the pleasantries of our State Society is the gavel presentation at our annual sessions to the retiring president. Mr. President, it must be a great source of satisfaction to you, as it is to us, to review the activities that you have carried out for our Society and the great good you have done, not only for this Society, but for all the people of the Commonwealth. After all is said and done, the greatest service that any physician can render is his service to humanity.

THE PRESIDENT: I shall not attempt to answer Dr. Hammond, because I might spoil a perfectly good speech, but I only want to say that whatever services I have rendered to the Medical Society of the State of Pennsylvania, or to the medical profession in general, have been from the bottom of my heart. I love the profession and I have been willing to give time and service in order that our profession might be raised to higher standards. I believe if each and every member of our Society had a similar feeling we could place ourselves in a very enviable position. We shall be asked this year to coöperate heartily in a legislative program which mightily interests us, and I want to bespeak your support for my successor. I thank you for this emblem, and will cherish it, and as I look at it remember that I have your good wishes.

I have served the allotted time for which I was elected and must pass the emblem of authority to my successor. For over ten years he has been a member of our Board of Trustees. During most of this period he has served as Chairman of the Committee on Finance. It is largely through his efforts that our present financial policy has been established, and as a reward for services rendered he has been elected to the highest office of the Society.

Please accept my hearty congratulations and best wishes, Dr. Albertson, and accept from my hand this emblem of authority and this badge which is rightfully yours. May success crown your every effort. I pledge you my individual support and ask the same from each member of our Society.

DR. HARRY W. ALBERTSON: In accepting this office I want first to thank you for this demonstration. I have tried to serve you as best I knew how, and it now becomes my duty to assume the office of President. You have given to my predecessor your heartiest coöperation, and in view of the fact that this year means so much to all of us, both from the standpoint of legislation and the various organization activities which we hope to see accomplished, I must ask for your continued support. I have chosen to speak to you today upon a few of the organization activities that have especially occupied my mind and have given to my paper the title, "Medicine and State."

(See October issue ATLANTIC MEDICAL JOURNAL.)

THE PRESIDENT: It now becomes my very great pleasure to introduce to you Dr. Wendell C. Phillips, of New York, President of the American Medical Association.

(The address of President Phillips is published in this issue of the JOURNAL.)

Adjournment.

IRA G. SHOEMAKER, *President,*
WALTER F. DONALDSON, *Secretary.*

Wednesday, October 13, 1926

The Wednesday morning session was called to order at 9:10 a.m., Dr. Clarence R. Phillips of Harrisburg, First Vice-President, presiding.

The following "Symposium on Cardiac Decompensation" was presented by the Pennsylvania Heart Association: "Etiology," Dr. Edgar M. Green, Easton; "Symptomatology," Dr. Charles H. Smith, Uniontown; "Treatment," Dr. Andrew P. D'zmura, Pittsburgh; "Diagnosis and Prognosis," Dr. John B. McAlister, Harrisburg. These papers were discussed by Drs. George W. Norris, Philadelphia; Wm. G. Falconer, Clearfield; Thomas McMillan, Philadelphia; and Aaron S. Cantor, Scranton.

The following case reports were presented: "Diverticulum Simulating Carcinoma," Dr. Alvin W. Sherrill, Pittsburgh; "A Case of Pneumococcic Meningitis Simulating Diabetic Coma, with Recovery," Dr. Albert E. Roussel, Philadelphia: "Melanosarcoma with Multiple Metastases to the Brain," Dr. Harold L. Mitchell, Pittsburgh; "Osteomyelitis Followed by Calcareous Resorption and Deposit in Soft Tissues," Dr. Fred D. Weidman, Philadelphia; "Gonococcus Infection with Rare Manifestations," Dr. Thomas T. Sheppard, Pittsburgh; "A Case of Coronary Thrombosis, with Lantern Slides Demonstrating the Injected Coronaries, the Electrocardiogram, and Pathologic Specimens," Dr. Joseph B. Wolffe, Philadelphia; "Pruritus as a Symptom of Vagatonia," Dr. Joseph V. Klauder, Philadelphia. There was no discussion.

The subject of periodic health examinations was presented by the Committee on Public Relations of the Medical Society of the State of Pennsylvania, as follows: "Responsibility for Life Extension," Dr. Walter F. Donaldson, Pittsburgh; "The Technic of Periodic Health Examinations," Dr. Orlando H. Petty, Philadelphia; "Opportune Recommendations for the Examinee," Dr. Lawrence Litchfield, Pittsburgh. This symposium was discussed by Drs. Judson Daland, Philadelphia; Francis A. Faught, Philadelphia; Joseph C. Bloodgood, Baltimore; Elliott B. Edie, Uniontown; and in closing by Dr. Walter F. Donaldson, Pittsburgh.

PRESIDENT ALBERTSON: Before I call upon the next essayist, our invited guest, I want to introduce to you my good friend and coworker, a man whom I have known for years, a man whose opinion I respect most highly, a man who has served the profession well, and whom you have seen fit to honor this morning by electing to the office of President-Elect of this Society for the coming year—Dr. A. C. Morgan, of Philadelphia.

DR. MORGAN: Members and friends; I cannot put on my new garments as yet, they are too new. I am also mindful of the fact that time is passing, and there are two promises I will make you, one is that the speeches made by the President-Elect will not be too long; and the second is that I appreciate this honor more deeply than words can express and that by the help of God I will render my best service.

THE PRESIDENT: It is a great honor to introduce to you Dr. Alfred S. Warthin, of the University of Michigan, who will speak to us on "Cardiovascular Syphilis."

On motion of Dr. Thomas G. Simonton, a rising vote of thanks was extended to Dr. Warthin for his presentation.

Adjournment.

CLARENCE R. PHILLIPS, *First Vice-President,*
CHRISTIAN B. LONGENECKER, *Assistant Secretary.*

Thursday, October 14, 1926

The Thursday afternoon session was called to order at 2:10 p.m., the president, Dr. Harry W. Albertson, of Scranton, presiding.

Dr. Sigmund Greenbaum, of Philadelphia, read a paper entitled "Experience With the Malarial Treatment of Syphilis." This paper was discussed by Drs. J Frank Schamberg, Philadelphia; Walter J. Free-

man, Philadelphia; Richard F. L. Ridgway, Harrisburg; and Henry W. Cattell, Philadelphia.

Dr. Cornelius C. Wholey, Pittsburgh, gave a motion picture presentation of a case of multiple personality. Dr. George W. Smeltz, Pittsburgh, read a paper entitled "The Nature of Hysteria." The above papers were discussed by Dr. Max Weinberg, Pittsburgh.

Dr. Francis Carter Wood, of New York City, delivered a lecture on the "Blair-Bell Treatment of Cancer."

On motion of Dr. Thomas G. Simonton, a rising vote of thanks was extended to Dr. Wood for his presentation.

The Medical Society of the State of Pennsylvania adjourned *sine die*.

Harry W. Albertson, *President*,
Walter F. Donaldson, *Secretary*.

MINUTES OF THE SECTION ON MEDICINE

Tuesday, October 12, 1926

The Section on Medicine convened in the Ball Room of the Bellevue-Stratford Hotel, Philadelphia, at 3 p. m., and was called to order by the Chairman, Dr. O. H. Perry Pepper, Philadelphia.

In the "Symposium on Bronchial Asthma" the following papers were read: "Hypersensitive Phenomena," by J. Alexander Clarke, Jr., Philadelphia; "Disease of the Upper Respiratory Tract in Relation to the Etiology and Treatment of Bronchial Asthma," by Dr. Simon S. Leopold and Dr. George Fetterolf, Philadelphia; and "The Interpretation of Skin Tests in the Diagnosis of Bronchial Asthma," by Dr. Richard A. Kern, Philadelphia. These papers were discussed by Dr. Ralph H. Spangler and Dr. Albert E. Blackburn, Philadelphia, and in closing by Dr. Clarke and Dr. Kern.

In the "Symposium on the Relation of Bacteriology to Clinical Medicine" the following papers were read: "The Significance of Regional Bacteriologic Flora," by Dr. DeWayne G. Richey, Pittsburgh; "The Clinical Use of Blood Cultures," by Dr. William R. Marshall, Pittsburgh; and "The Incidence of Pneumococcus Types in Pneumonia," by Dr. Joseph W. McMeans, Pittsburgh. These papers were discussed by Dr. David H. Bergey, Philadelphia.

Dr. Howard T. Karsner of Cleveland, Ohio, then addressed the Section on the subject of "The Pathology of Function," after which the Chairman, on behalf of the Section, thanked Dr. Karsner for his excellent address.

The Section adjourned at 5:35 p.m.

Wednesday, October 13, 1926

The Section on Medicine convened at the Philadelphia General (Blockley) Hospital, and was called to order at 2:05 p.m. by the Chairman, Dr. O. H. Perry Pepper, Philadelphia.

The following subjects were presented and patients demonstrated: Dr. J. C. Doane, Philadelphia General Hospital, "Amoss' Anti-erysipelas Serum in the Treatment of Erysipelas"; Dr. Truman G. Schnabel, Hospital of the University of Pennsylvania, "The Control of Cardiac Pain"; Dr. Russell Richardson, Hospital of the University of Pennsylvania, "Diabetes"; Dr. Thomas M. McMillan, Philadelphia General Hospital (for Dr. Henry D. Jump who was detained by illness), "A Case of Auricular Flutter Treated with Large Doses of Quinidin"; Dr. Thomas M. McMillan, Philadelphia General Hospital, "Auricular Flutter, Treatment"; Dr. Edward Weiss, Jefferson Hospital, "Subacute Bacterial Endocarditis"; Dr. George Wilson, Hospital of the University of Pennsylvania, "Treatment of Neurosyphilis, Especially Paresis, by Inoculation with Malaria"; Dr. Mitchell Bernstein, Jefferson Hospital, "Boeck's Sarcoid of the Skin with Constitutional Symptoms"; Dr. William D. Stroud, Pennsylvania Hospital, "The Importance of Persistent Digitalis Therapy in Auricular Fibrillation"; Dr. A. A. Stevens, Philadelphia General Hospital, "Gout"; Dr. Harold W. Jones, Jefferson Hospital, "Purpura Hemorrhagica"; Dr. Burgess Gordon, Jefferson Hospital, "A Nervous Influence as a Cause for a Disturbed Function of the Thyroid Gland"; and Dr. David L. Farley and Dr. J. P. Dixon, Pennsylvania Hospital, "A Case of Acute Nephritis with Emphasis on Treatment."

The Chairman stated that he would, on behalf of the Section, write letters to the gentlemen who had been kind enough to bring patients and present them during the afternoon.

The Section adjourned at 5 p.m.

Thursday, October 14, 1926

The Section on Medicine convened in the Ball Room of the Bellevue-Stratford Hotel, Philadelphia, and was called to order at 9:05 a.m., by the Chairman, Dr. O. H. Perry Pepper, Philadelphia.

The Executive Committee—Dr. Adam J. Simpson, of Chester, Dr. Charles F. Falkowsky, of Scranton, and Dr. Roy R. Snowden, of Pittsburgh, reported that the following officers were nominated to serve for the coming year: Chairman, Dr. W. W. G. Maclachlan, Pittsburgh; Secretary, Dr. Jesse L. Lenker, Harrisburg. Upon motion duly seconded and carried, Dr. Maclachlan and Dr. Lenker were unanimously elected.

The following case reports were presented: "Deep X-Ray Therapy in Brain Tumor," by Dr. Max H. Weinberg, Pittsburgh; "Pneumococcic Septicemia," by Dr. Ellis M. Frost, Pittsburgh; "Tremor of the Diaphragm," by Dr. Elliott B. Edie, Uniontown; "Hemorrhagic Pancreatitis," by Dr. George A. Clark, Scranton; "Multiple Focal Infection, and the Complete Medical Survey in Relation Thereto," by Dr. Francis A. Faught, Philadelphia; "Toxic Nephritis Treated by Renal Decapsulation," by Dr. George L. Armitage, Chester; "Pyloric Syndrome in Extragastric Disease," by Dr. J. Quincy Thomas, Norristown; and "Acute Lymphatic Leukemia, with Atypical Terminal Symptoms," by Dr. Edgar S. Buyers, Norristown. These were discussed by Dr. Elliott B. Edie, Uniontown; Dr. F. Faught, Philadelphia; Dr. O. H. Perry Pepper, Philadelphia; Dr. Roy R. Snowden, Pittsburgh; and in closing by Dr. George A. Clarke, Scranton.

In the "Symposium on Practical Therapeutics" the following papers were presented: "Intravenous Therapy," by Dr. James I. Johnston, Pittsburgh; "Newer Diuretics," by Dr. Roy R. Snowden, Pittsburgh; and "Iodin Therapy in the Treatment of Goiter," by Dr. Frederick B. Utley, of Pittsburgh. These papers were discussed by Dr. Herman A. Heise, Uniontown, and in closing by Dr. James I. Johnston, Pittsburgh.

In the symposium on "A Critical Review of Encephalitis," the following papers were presented: "The Clinical Manifestation and the Problem of Acute Encephalitis from the Internist's Viewpoint," by Dr. Walter M. Bortz, Greensburg; "The Pathology and Bacteriology of Epidemic Encephalitis," by Dr. Albert J. Bruecken, Pittsburgh; "Symptomatology of the Residuals of Epidemic Encephalitis," by Dr. William H. Mayer, Pittsburgh. These papers were discussed

by Dr. Max H. Weinberg, Pittsburgh; Dr. Walter J. Freeman, Washington, D. C.; and in closing by Dr. Albert J. Bruecken and Dr. William H. Mayer, Pittsburgh.

In announcing the second guest speaker of the Medical Section—Dr. Edward Francis of the U. S. Public Health Service, Washington, D. C., who spoke on the subject of "Tularemia"—the Chairman said: Dr. Francis bears a very close relationship to tularemia. He is responsible for most of what we know about the disease; he has had it himself, acquired in the course of his experiments. Tularemia is of growing importance to us, for more cases are being recognized all the time, and no one could present the subject better than the chief investigator." Dr. Francis then addressed the Section on "Tularemia," illustrating with lantern slides. The Chairman then stated: "I am sure I voice the feelings of the Section in expressing our great appreciation to Dr. Francis, and in thanking him heartily for coming and presenting this topic to us. What we can each do for him is, having found these cases, to send a sample of serum to Dr. Francis."

The Section adjourned at 1:00 p.m. *sine die.*

O. H. PERRY PEPPER, *Chairman,*
W. W. G. MACLACHLAN, *Secretary.*

Members Registered in the Section on Medicine

ADAMS COUNTY SOCIETY—T. C. Miller, Abbottstown; W. E. Wolff, Arendstville; J. P. Dalbey, Edgar A. Miller, Gettysburg.

ALLEGHENY COUNTY SOCIETY—W. J. McGeary, Allison Park; W. R. Marshall, W. N. Marshall, Aspinwall; J. C. Nicholls, Braddock; H. E. Clark, Corliss Station; C. A. Orr, Crafton; E. P. Griffiths, Etna; P. Mendlowitz, McKeesport; J. I. Wiseman, K. S. Wiseman, Mayview; F. W. Mathewson, Oakdale; I. H. Alexander, J. J. Borgman, C. J. Bowen, A. H. Colwell, W. F. Donaldson, I. S. Diller, A. P. D'zmura, E. M. Frost, G. W. Grier, W. T. Hall, J. D. Heard, C. H. Henninger, H. E. Halferty, R. T. Hood, J. I. Johnston, H. L. Jones, L. Litchfield, W. W. G. Maclachlan, J. W. McMeans, C. B. Maits, W. H. Mayer, E. F. Meschter, H. L. Mitchell, L. M. Mitchell, H. W. Morrow, D. G. Richey, E. P. Schatzman, T. T. Sheppard, A. W. Sherrill, G. W. Smeltz, R. R. Snowden, T. G. Simonton, J. M. Thorne, F. B. Utley, C. J. Vaux, J. A. Walsh, M. H. Weinberg, C. C. Wholey, Pittsburgh; S. E. Lambert, Sewickley; J. A. Hawkins, Solebury; H. Bartle, Wilkinsburg; R. L. Hill, Woodville.

ARMSTRONG COUNTY SOCIETY—N. D. Marbaker, Brick Church; J. B. F. Wyant, Kittanning.

BEAVER COUNTY SOCIETY—E. J. Aten, Ambridge; M. I. Cornelius, Beaver; M. L. McCandless, Rochester.

BEDFORD COUNTY SOCIETY—W. F. Enfield, W. E. Nycum, Bedford; W. Ayres, Carlisle.

BERKS COUNTY SOCIETY—O. T. Gehris, Fleetwood; G. F. Potteiger, Hamburg; J. L. Bower, Birdsboro; J. S. Borneman, Boyertown; R. M. Alexander, C. W. Bachman, J. M. Bertolet, H. Bley, I. H. Hartman, A. P. Isenberg, W. F. Krick, J. E. Livingood, C. S. Reber, I. G. Shoemaker, S. B. Taylor, Reading; S. S. Hill, Wernersville; E. D. Funk, D. G. Moyer, Wyomissing.

BLAIR COUNTY SOCIETY—J. U. Blose, A. S. Kech, Altoona; H. J. Sommer, Hollidaysburg; C. C. Bradin, Tyrone.

BRADFORD COUNTY SOCIETY—D. L. Bevan, Leroy; A. J. Bird, New Albany; S. D. Conklin, Sayre.

BUCKS COUNTY SOCIETY—A. F. Myers, Blooming Glen; J. Collins, H. Pursell, Bristol; J. B. Carrell, Hatboro; S. A. Leinbach, W. F. Weisel, Quakertown; H. Fleckenstine, Newportville; C. B. Smith, Newtown; Jesse E. Packer, Newtown; E. E. Pownall, Richboro; J. F. Crouthamel, Souderton.

BUTLER COUNTY SOCIETY—W. R. Hockenberry, Slippery Rock.

CAMBRIA COUNTY SOCIETY—H. G. Difenderfer, Beaverdale; F. U. Ferguson, Gallitzin; W. G. Turnbull, Harrisburg; H. B. Anderson, H. L. Hill, B. McCloskey, Johnstown; S. D. Boucher, Portage; W. S. Dougherty, Portage; E. Pardoe, South Fork; E. P. Dickinson, St. Michael.

CARBON COUNTY SOCIETY—J. A. Trexler, Lehighton.

CENTER COUNTY SOCIETY—D. Dale, J. L. Seibert, Bellefonte; P. H. Dale, State College.

CHESTER COUNTY SOCIETY—D. H. Williams, Berwyn; F. H. Wells, Chester Springs; W. W. Betts, Chadds Ford; S. H. Scott, Coatesville; U. G. Gifford, Kennett Square; J. R. Maxwell, Parkersburg; W. N. Smith, Phœnixville; J. T. Taylor, Pomeroy; C. J. Brower, Spring City; C. C. Bullock, I. P. P. Hollingsworth, O. J. Klevan, H. Pleasants, Jr., W. T. Sharpless, West Chester; W. B. Ewing, West Grove.

CLARION COUNTY SOCIETY—C. C. Ross, Clarion.

CLEARFIELD COUNTY SOCIETY—B. G. Learn, Ansonville; H. L. Woodside, Bigler; W. G. Falconer, J. P. Frantz, G. D. Fussell, J. M. Quigley, Clearfield; I. S. Flegal, Karthaus; J. M. Cornely, Madera; G. A. Ricketts, Osceola Mills; H. H. Thompson, Philipsburg; W. S. Bryan, Ramey; G. B. Shivery, Woodland.

CLINTON COUNTY SOCIETY—M. D. Campbell, Loganton.

COLUMBIA COUNTY SOCIETY—J. R. Gemmill, Millville.

CRAWFORD COUNTY SOCIETY—S. F. Hazen, Hartstown; E. J. Werle, Meadville.

CUMBERLAND COUNTY SOCIETY—S. Dana Sutliff, Shippensburg.

DAUPHIN COUNTY SOCIETY—H. F. Gross, D. J. Hetrick, J. L. Lenker, J. B. McAlister, G. R. Moffitt, J. W. MacMullen, C. R. Phillips, C. M. Rickert, R. F. Ridgway, L. E. Shaw, Harrisburg; J. E. Bogar, Millersburg; M. O. Putt, Oberlin; W. S. Russell, J. K. Wagenseller, Philadelphia; O. J. Kingsbury, H. C. Myers, Steelton.

DELAWARE COUNTY SOCIETY—W. A. Blair, W. V. Emery, R. S. Maison, W. N. Neufeld, A. M. Sharpe, G. B. Sickel, A. J. Simpson, J. W. Wood, Chester; R. Owen, Moores; J. C. Jenkins, West Chester Pike.

ELK COUNTY SOCIETY—G. M. Hutchison, Dagus Mines; S. G. Logan, Ridgway.

ERIE COUNTY SOCIETY—J. E. O'Brien, Erie.

FAYETTE COUNTY SOCIETY—J. V. McAninch, Alicia; H. J. Bell, Dawson; J. B. Skurkay, Masontown; C. H. Smith, Morgantown; A. E. Coughenour, Point Marion; J. L. McCracken, Smithfield; R. S. Martin, Star Junction; E. B. Edie, J. Karolcik, G. N. Riffle, Uniontown; J. H. Hazlett, Vanderbilt.

FRANKLIN COUNTY SOCIETY—A. W. Thrush, Chambersburg; H. C. McClain, Hustontown; A. Stewart, Shippensburg; J. H. Swan, St. Thomas, J. W. Croft, Waynesboro.

GREENE COUNTY SOCIETY—E. W. Laidley, Carmichaels; R. E. Brock, D. R. Jacobs, T. N. Millikin, Waynesburg.

HUNTINGDON COUNTY SOCIETY—J. M. Beck, Alexandria; M. B. Morgan, Huntingdon.

INDIANA COUNTY SOCIETY—C. H. Bee, M. M. Davis, Indiana.

Jefferson County Society—A. F. McCormick, Falls Creek, L. Z. Hayes, Force.

Lackawanna County Society—U. G. Anderson, Carbondale; O. R. Blair, Clarks Summit; M. Finkelstein, J. J. O'Connor, Olyphant; J. J. Brennan, A. S. Cantor, G. A. Clark, P. J. Davies, W. T. Davis, D. W. Evans, C. Falkowsky, Jr., J. D. Lewis, M. T. O'Malley, J. E. O'Toole, Scranton.

Lancaster County Society—H. S. Ziemer, Adamstown; J. A. Boyd, Christiana; H. S. Dissler, Denver; H. G. Reemsnyder, Ephrata; J. E. Hostetter, Gap; W. C. Keller, Harrisburg; W. K. Baer, H. G. Barsumian, F. G. Hartman, R. N. Klemmer, H. C. Kinzer, H. D. Leh, W. F. Mylin, W. O. Blankenship, H. Pomerantz, Lancaster; P. R. Wentz, New Holland; L. M. Bryson, Paradise; C. E. Helm, Quarryville; J. S. Kendig, Salunga.

Lawrence County Society—W. A. Womer, New Castle.

Lebanon County Society—J. D. Boger, H. E. Maulfair, F. B. Witmer, Lebanon.

Lehigh County Society—J. T. Butz, V. J. Gangewere, W. F. Herbst, W. J. Schatz, F. R. Wentz, T. L. Smyth, Allentown; I. J. Weida, Emaus.

Luzerne County Society—L. S. Luppold, Freeland; C. H. Miner, Harrisburg; J. C. Kochczynski, Hazleton; H. L. Whitney, Plymouth; M. J. Van Horn, Town Hill; A. Armstrong, White Haven; E. W Bixby, W. F. Danzer, W. J. Doyle, Wilkes-Barre.

Lycoming County Society—E. Everett, Dushore. R. B. Hayes, Jersey Shore; G. C. Davis, Milton, R. B. Tule, Milton; W. E. Turner, Montgomery; F. C. Lechner, Montoursville; J. W. Albright, Muncy; J. C. Fulmer, W. W. Hull, Philadelphia; I. T. Gilmore, Picture Rocks; H. K. Davis, Sonestown; A. C. Hass, Warrensville; C. E. Allison, W. S. Brenholtz, J. A. Campbell, G. D. Castleburg, W. E. Delaney, G. R. Drick, L. M. Hoffman, P. H. Decker, E. N. Ritter, C. H. Senn, R. F. Trainer, A. D. Van Dyke, Williamsport.

McKean County Society—W. A. Ostrander, Smethport.

Mercer County Society—R. D. Nicholls, Farrell; W. W. Richardson, Mercer; G. W. Kennedy, Sharon; P. E. Biggins, Sharpsville; J. E. Ferringer, Stoneboro.

Mifflin County Society—J. S. Brown, J. A. C. Clarkson, J. W. Mitchell, Lewistown; B. P. Steele, McVeytown.

Monroe County Society—M. R. Metzger, Stroudsburg.

Montgomery County Society—P. J. Lukens, Ambler; C. W. Lueders, Cynwyd; J. H. Seiple, Center Square; G. T. Lukens, J. Q. Thomas, Conshohocken; E. T. Quinn, Jenkintown; E. S. Buyers, W. W. Dill, A. R. Garner, B. F. Hubley, J. N. Huntsberger, R. Knipe, H. C. Podall, J. G. Wilson, Norristown; C. F. Doran, Phœnixville; F. W. VanBuskirk, Pottstown; W. J. Wright, Skippack; H. B. Shearer, Worcester.

Montour County Society—H. L. Foss, G. B. M. Free, J. A. Jackson, R. A. Keilty, C. Shultz, Danville; C. S. Tomlinson, Milton.

Northampton County Society—M. A. Sanders, Bangor; E. L. Smock, Bath; F. J. Dever, E. B. Schlier, Bethlehem; M. W. Phillips, Chapman Quarries; E. E. Bush, Danielsville; A. S. Fox, J. E. Fretz, E. M. Green, V. S. Messinger, J. J. Quiney, F. C. Roberts, Easton; E. J. Deibert. W. H. Rentzheimer, Hellertown; V. J. Koch, Nazareth; C. F. Stofflet, Pen Argyl; J. E. Longacre, Weaversville.

Northumberland County Society—C. H. Malick, Herndon; E. R. Samuel, Mt. Carmel; J. J. Donahue, G. W. Reese, H. T. Simmonds, Shamokin; H. W. Gass, S. B. Geise, R. B. McCay, Sunbury.

Perry County—L. A. Carl, Newport.

Philadelphia County Society—F. P. Lytle, Birdsboro; H. A. Holland, C. J. Hatfield, Chestnut Hill; J. H. Brewster, M. H. Rea, J. A. Kolmer, Cynwyd; B. F. Stahl, Haverford; E. A. Case, Lansdowne; W. H. Lindsey, Llanerch; M. S. Bailey, D. Nathan, Norristown; C. T. Adams, C. S. Aitken, H. B. Allyn, A. Anders, H. S. Anders, J. M. Anders, J. H. Arnett, W. W. Babcock, R. W. Bailey, F. K. Baker, F. S. Baldi, O. A. Barrett, E. L. Bauer, F. Baumann, W. D. Baun, E. J. G. Beardsley, J. T. Beardwood, A. G. Beckley, D. H. Bergey, H. L. Bernardy, A. Bernheim, M. Bernstein, J. P. Besser, J. C. Birdsall, A. E. Blackburn, W. J. Blackburn, M. S. Blieden, N. Blumberg, R. S. Boles, L. N. Boston, D. R. Bowen, T. B. Bradley, G. C. Brannon, A. Brav, W. R. Bready, N. F. Brecker, C. R. Bridgett, F. A. Bridgett, J. D. Brittingham, C. P. Brown, C. J. Bucher, C. W. Burr, J. M. Cahan, H. K. Carey, S. A. Carpenter, J. B. Carson, P. B. Cassidy, H. W. Cattell, J. E. Cattell, J. B. Chaiken, G. J. Chandlee, J. C. Chestnut, C. A. E. Codman, D. T. Cooke, T. S. Cope, B. L. Crawford, J. Daland, H. J. Darmstadter, A. H. Davisson, P. DeLong, B. F. Diseroad, W. Drummond, J. H. Dubbs, F. Eft, J. Eiman, E. H. Erney, A. A. Euster, W. Evans, W. W. Farr, J. T. Farrell, F. A. Faught, A. Feibus, P. Fischelis, H. Fox, L. W. Fox, M. K. Formad, H. D. Fraser, F. J. Frosch, D. H. Fuller, E. H. Funk, S. L. Gans, H. D. Geisler, S. P. Gerhard, S. Gilpin, A. L. Gillars, M. Ginsburg, R. M. Goepp, S. J. Goldberg, W. H. Good, A. Gordon, F. M. Gottshall, J. B. Haines, W. T. Hamilton, H. Hanna, C. H. Harbaugh, H. A. Hare, J. M. Hayman, W. F. Hebsacker, H. F. Heinkel, J. N. Henry, A. Herman, W. S. Higbee, C. J. Hoban, I. W. Hollingshead, R. S. Holtzhausser, N. H. Hornstine, D. M. Hoyt, S. I. Immerman, M. Jacob, S. Jaffe, H. L. Jameson, A. E. Johnson, W. T. Johnson, H. D. Jump, F. J. Kalteyer, M. J. Karpeles, E. E. Keiser, E. W. Kelsey, R. A. Kern, S. P. Kerns, L. A. Kirschner, G. A. Knowles, F. W. Konzelmann, D. W. Kramer, D. M. Krough, H. A. Lacy, E. H. Leaman, M. V. Leof, S. S. Leopold, A. Levy, C. F. Long, J. E. Loughbridge, B. B. V. Lyon, D. Macfarlan, D. J. McCarthy, R. S. McCombs, N. S. McDowell, W. McKeage, J. D. McLean, C. Marshall, A. C. Menger, M. K. Meyers, E. W. Michener, H. McC. Miller, W. J. MacMurtrie, T. G. Miller, H. K. Mohler, J. A. Moore, A. C. Morgan, S. H. Nabut, W. S. Newcomet, W. Nichols, C. T. C. Nurse, J. A. O'Connell, T. I. O'Drain, W. B. Odenatt, A. E. Oliensis, M. E. Osmond, A. J. Ostheimer, S. J. Ottinger, H. G. Palmer, J. R. Paul, O. H. P. Pepper, M. F. Percival, O. H. Petty, G. P. Pilling, C. S. Potts, E. G. Ravdin, E. P. Reiff, J. H. Remig, R. Richardson, D. Riesman, W. E. Robertson, W. D. Robinson, M. Rosen, C. Roland, R. C. Rosenberger, J. M. Rosenthal, D. A. Roth, A. E. Roussel, A. I. Rubenstone, S. C. Runkle, R. S. Rushling, S. A. Savitz, G. J. Saxon, H. Schlaff, T. B. Schneideman, B. F. Scholl, B. F. Schnabel, M. Schwartz, I. R. Shoemaker, W. B. Scull, C. A. Service, P. A. Sheaff, J. H. Sherman, F. M. Schilling, F. B. Skversky, O. E. Snodgrass, E. W. Spackman, W. L. C. Spaeth, R. H. Spangler, I. Starr, A. Sterling, S. R. Sterling, I. T. Strittmatter, W. D. Stroud, R. P. Sturr, J. E. Talley, F. W. Thomas, A. Trasoff, P. A. Trau, L. Tuft, C. V. Vischer, T. J. Vischer, E. T. Ward, S. L. Weintraub, A. P. Weaver, H. L.

Weiner, G. L. Weinstein, E. Weiss, E. B. Wenner, B. F. Wentz, M. Wenzel, J. W. West, C. Y. White, G. F. Willey, H. B. Wilmer, G. Wilson, T. N. Weisenberg, S. Wolf, S. Wolfe, J. B. Wolffe, A. C. Wood, H. C. Wood, Jr., N. N. S. Yawger, C. G. Yaeger, G. C. Yeager, G. G. Yost, A. J. Zimlick, Philadelphia; J. A. Murphy, Swarthmore, D. T. Ditchburn, L. S. Carey, Upper Darby; C. A. LeCates, Tannersville; W. Freeman, Wash., D. C.,; S. Egbert, Wayne.

POTTER COUNTY SOCIETY—N. W. Church, Ulysses.

SCHUYLKILL COUNTY SOCIETY—J. L. Hoffman, Ashland; H. C. Bowman, Gilberton; I. D. Fenton, D. A. Holland, Mahanoy City; O. J. Carlin, J. S. Carpenter, J. G. Kramer, Pottsville; J. Rhoads, Ringtown; J. A. Lessig, Schuylkill Haven; J. S. Callen, C. Gruhler, Shenandoah; A. B. Fleming, Tamaqua, J. W. Schultz, Tremont.

SNYDER COUNTY SOCIETY—P. E. Whiffen, McClure; P. Herman, Selinsgrove.

SOMERSET COUNTY SOCIETY—M. U. McIntyre, Boswell; C. I. Shaffer, Ralphton.

SUSQUEHANNA COUNTY SOCIETY—D. J. Peck, Susquehanna.

TIOGA COUNTY SOCIETY—H. Z. Frisbie, Elkland; H. G. Meaker, Tioga; F. X. Field, C. W. Sheldon, Wellsboro.

UNION COUNTY SOCIETY—A. V. Persing, Allenwood; O. W. Glober, Laurelton.

VENANGO COUNTY SOCIETY—J. M. Murdoch, Franklin; P. Bruner, Oil City.

WARREN COUNTY SOCIETY—R. B. Mervine, Sheffield; H. W. Mitchell, M. P. Mitchell, H. K. Petry, M. T. Smith, Warren.

WASHINGTON COUNTY SOCIETY—W. D. Martin, Dunn's Station; C. A. Crumrine, J. H. Shannon, Washington.

WESTMORELAND COUNTY SOCIETY—W. M. Bortz, Greensburg; C. B. Rugh, New Alexandria; J. P. Strickler, Scottdale.

WYOMING COUNTY SOCIETY—H. L. McKown, Tunkhannock.

YORK COUNTY SOCIETY—J. T. Harbold, Dallastown; C. J. Hamme, Dover; N. A. Overmiller, East Prospect; W. H. Treible, G. E. Holtzapple, P. A. Noll, York.

MINUTES OF THE SECTION ON SURGERY

Tuesday, October 12, 1926

The Chairman of the Section on Surgery, Dr. James H. Baldwin, Philadelphia, called the meeting to order at 3 p. m., in the South Roof Garden, Bellevue-Stratford Hotel. Philadelphia.

The following constituted the program:

The first period was devoted to a "Symposium on Thoracic Surgery." Dr. Byron H. Jackson, Scranton, read a paper entitled "The X-Ray Diagnosis of Empyema," with lantern-slide demonstration. Dr. Ethan Flagg Butler, Sayre, read a paper entitled "The Surgical Management of Empyema." Dr. Chevalier Jackson, Philadelphia, read a paper entitled "The Bronchoscope as an Aid in the Diagnosis and Treatment of Pulmonary Infections" (chalk talk and lantern demonstration). Dr. George P. Muller, Philadelphia; Dr. Lever F. Stewart, Clearfield, and Dr. C. E. Thomson, Scranton, discussed these papers. Dr. Butler closed the discussion.

The second period was devoted to a "Symposium on Gynecology." Dr. Floyd E. Keene, Philadelphia, and Dr. R. A. Kimbrough, Philadelphia, contributed a paper entitled "Endometrial Hematomata of the Ovary," with lantern demonstration, the paper being read by Dr. Keene. Dr. Brooke M. Anspach, Philadelphia, read a paper on "When Shall We Treat Retroflexioversion of the Uterus and How?" Dr. Paul Titus, Pittsburgh, prepared a paper entitled "The Rubin Test in the Diagnosis and Treatment of Sterility in Women," which, in his unavoidable absence, was read by Dr. R. A. D. Gillis. The paper was illustrated by lantern slides. Dr. Sidney A. Chalfant, Pittsburgh, and Dr. Richard C. Norris, Philadelphia, discussed these papers.

The third period was devoted to an address by Dr. Joseph C. Bloodgood, Baltimore, Md., on "Bone Tumors," illustrated by lantern slides. Dr. Bloodgood appeared before the Section by invitation.

The Section adjourned at 5:45 p. m.

Wednesday, October 13, 1926

The Chairman, Dr. James H. Baldwin, Philadelphia, called the meeting to order at 2 p.m., in the Ball Room of the Bellevue-Stratford Hotel.

The Executive Committee—Dr. Harold L. Foss, Danville, Dr. George M. Dorrance, Philadelphia, and Dr. William L. Estes, Jr., Bethlehem—reported that the following officers were nominated to serve for the coming year: Chairman, Dr. Evan W. Meredith, Pittsburgh; Secretary, Dr. Harvey F. Smith, Harrisburg. Upon motion duly seconded and carried, Dr. Meredith and Dr. Smith were unanimously elected.

The first period of this second session was devoted to a "Symposium on the Thyroid Gland." The following papers were read: "The Physiology of the Thyroid," with lantern demonstration, by Dr. Edward C. Kendall, Mayo Clinic, Rochester, Minn., who appeared before the Section by invitation; "Diagnosis of Thyroid Disease," by Dr. David Riesman, Philadelphia; "The Treatment of Goiter," by Dr. Harold L. Foss, Danville. Dr. James D. Heard, Pittsburgh; Dr. Donald Guthrie, Sayre; Dr. A. E. Roussel, Philadelphia, and Dr. Israel Bram, Philadelphia, discussed these papers.

The second period was devoted to a "Symposium on Industrial Surgery." The following papers were read: "Problems in the Treatment of Superficial Burns," with lantern demonstration, by Dr. I. S. Ravdin, Philadelphia; "Hernia in Its Relation to the Compensation Law," by Dr. Roger P. Batchelor, Palmerton; "The Treatment of Cranial Trauma," by Dr. Lyndon H. Landon, Pittsburgh; "Physiotherapy and Its Rôle in Rehabilitation of the Injured," by Dr. E. B. Rebhorn, Scranton. These papers were discussed by Dr. Loyal A. Shoudy, Bethlehem; Dr. Hubley R. Owen, Philadelphia, and Dr. Jonathan M. Wainwright, Scranton. Dr. Radvin closed the discussion. Dr. Samuel P. Mengel, Wilkes-Barre, did not appear.

The third period was devoted to the following case reports: "Acute Suppurative Appendicitis with Acute Suppurative Cholecystitis," by Dr. William A. Hausman, Jr., Allentown; "Acute Perforated Gastric Ulcer and Treatment," by Dr. Lloyd G. Cole, Blossburg; "An Unusual Case of Hernia in an Infant," by Dr. John W. Bruner, Bloomsburg; "Comminuted Fracture of the Ilium with Ruptured Kidney," by Dr. George W. Reese, Shamokin; "Inoperable Urethrovesicovaginal Fistula Cured by Simultaneous Double Ureteral Transplantation into Pelvic Colon by Coffey Technic," by Dr. Carlyle N. Haines, Sayre; "Intestinal Obstruction Caused by a Meckel's Diverticulum," by Dr. Walter

C. Shaw, Ridgway; "Labor Complicated by a Large Ovarian Cyst," by Dr. John B. Nutt, Williamsport; and "Congenital Pyloric Stenosis" (two cases), by Dr. Norman B. Shepler, Harrisburg.

The Section adjourned at 5 p. m.

Thursday, October 14, 1926

The Chairman, Dr. James H. Baldwin, Philadelphia, called the meeting to order at 8:30 a. m., in the amphitheater of the Philadelphia General Hospital, Thirty-fourth and Pine Streets, and stated that there would be a dry clinic conducted by staff members.

Dr. J. Torrance Rugh, Philadelphia, presented "Complications of Surgical Tuberculosis."

Dr. Edmund B. Piper, Philadelphia, gave a "Demonstration of a New Forceps for Delivery of the After-coming Head."

Dr. Robert H. Ivy, Philadelphia, described "Plastic Surgery of the Face," illustrating with several cases.

Dr. Thomas A. Shallow, Philadelphia, presented "A Case of Arteriovenous Aneurysm Involving the Axillary Vein and the Axillary Artery, Associated with True Aneurysm of the Axillary Artery," and in addition, a case of "Tumor of the Cervical Region of the Spinal Cord." Discussion by Dr. E. A. Nicodemus, Harrisburg, Dr. Shallow closing.

"Radium in the Treatment of Neoplasms" was described by Dr. Henry K. Pancoast, Philadelphia, and patients were presented by Dr. John B. Carnett, Philadelphia.

Dr. Thomas C. Stellwagon, Philadelphia, described and demonstrated "The Treatment of Gonorrheal Arthritis."

Dr. Clifford B. Lull, Philadelphia, spoke on "Obstetrical Problems."

Dr. T. Turner Thomas, Philadelphia, discussed "General Surgical Problems."

Dr. Hubley R. Owen, Philadelphia, presented "End Results of Pylorectomy and Atypical Hernias."

The Section adjourned at 12:50 p. m.

James H. Baldwin, *Chairman*,
Albert F. Hardt, *Secretary*.

Members Registered in the Section on Surgery

Adams County Society—J. McC. Dickson, Gettysburg.

Allegheny County Society—D. P. McCune, Mckeesport; H. H. Meanor, Coraopolis; M. Snyder, New Kensington; R. L. Anderson, A. J. Buka, W. H. Cameron, S. S. Carrier, S. A. Chalfant, R. D. Gillis, J. B. Griffith, J. P. Griffith, J. P. Kerr, H. E. McGuire, W. O. Markell, C. C. Marshall, C. C. Mechling, E. W. Meredith, M. A. Slocum, Pittsburgh; G. E. Cramer, Sharpsburg; G. C. Seitz, Swissvale.

Armstrong County Society—E. C. Winters, Ford City; J. M. Cooley, Kittanning.

Beaver County Society—J. H. Wilson, Beaver; R. M. Patterson, T. P. Simpson, Beaver Falls.

Berks County Society—J. M. Bertolet, W. D. Greisemer, H. M. Leinbach, F. G. Runyeon, Reading.

Blair County Society—J. D. Findley, W. H. Howell, H. F. Moffitt, Altoona; B. B. Levengood, Bellwood; H. B. Cunningham, Juniata.

Bradford County Society—E. F. Butler, D. Guthrie, C. N. Haines, Sayre; M. B. Ballard, Troy.

Bucks County Society—W. C. LeComte, J. F. Wagner, Bristol.

Cambria County Society—B. A. Braude, W. J. Murray, L. W. Hornick, J. B. Lowman, W. O. Lubken, J. B. McAneny, C. B. Milhoff, L. L. Porch, W. J. Reddy, J. L. Sagerson, R. J. Sagerson, Johnstown; P. E. Lavelle, Lilly.

Carbon County Society—R. P. Batchelor, Palmerton.

Chester County Society—D. P. Rettew, J. T. Taylor, Coatesville; H. Mellor, J. Scattergood, West Chester.

Clearfield County Society—L. F. Stewart, W. O. Wilson, Clearfield; A. C. Lynn, Philipsburg.

Clinton County Society—G. D. Mervine, T. E. Teah, D. W. Thomas, Lock Haven.

Columbia County Society—J. W. Bruner, J. S. John, C. B. Yost, Bloomsburg.

Crawford County Society—H. C. Winslow, Meadville.

Cumberland County Society—H. A. Spangler, Carlisle.

Dauphin County Society—C. Coover, F. H. Coover, G. L. Laverty, E. A. Nicodemus, J. F. Reed, N. B. Shepler, H. F. Smith, G. B. Stull, F. Van Sickle, Harrisburg; E. R. Whipple, Steelton; A. A. Bobb, H. A. Shaffer, Williamstown.

Delaware County Society—G. L. Armitage, H. M. Armitage, W. E. Egbert, W. B. Evans, H. Gallager, M. Lambichi, Chester; M. P. Dickeson, Media; F. E. Chamberlin, Glenolden; J. J. Sweeney, Highland Park; R. G. Witman, Swarthmore.

Elk County Society—W. C. Shaw, Ridgway.

Erie County Society—F. P. McCarthy, Erie.

Fayette County Society—A. E. Crow, R. H. Jeffrey, C. M. Luman, G. H. Robinson, Uniontown.

Franklin County Society—W. C. Schultz, A. B. Snively, Waynesboro.

Huntingdon County Society—C. G. Brumbaugh, H. C. Frontz, F. R. Hutchison, J. M. Johnston, Huntingdon; R. R. Decker, Lewistown.

Indiana County Society—A. T. Rutledge, Blairsville; F. F. Moore, Homer City; M. L. Raymond, Lansdowne.

Jefferson County Society—W. Dick, Brookville; S. M. Free, DuBois; S. M. Beyer, J. E. Grube, Punxsutawney; J. G. Kearney, Reynoldsville.

Lackawanna County Society—R. J. Lloyd, Olyphant; H. W. Albertson, W. H. Berge, B. Jackson, M. I. Pentecost, E. H. Rebhorn, C. E. Thomson, J. M. Wainwright, J. N. White, Scranton.

Lancaster County Society—J. P. Kennedy, Columbia; T. B. Appel, J. L. Atlee, E. S. Crosland, S. G. Pontius, C. P. Stahr, T. C. Shookers, C. W. Ursprung, Lancaster; G. A. Harter, Maytown.

Lebanon County Society—S. A. Light, Lebanon; J. H. Bryner, Quentin.

Lehigh County Society—F. S. Boyer, T. W. Cook, F. A. Fetterolf, W. A. Hausman, Jr., P. F. Newman, Allentown; C. R. Fox, Northampton; C. H. Muschlitz, Slatington.

Luzerne County Society—C. A. Judge, Forty Fort; W. Lathrop, L. H. Smith, Hazleton; H. W. Croop, L. S. Reese, Jr., C. L. Shafer, Kingston; C. W. Prevost, J. B. Mahon, Pittston; H. B. Gibby, J. Howorth, P. P. Mayock, S. M. Wolfe, Wilkes-Barre; A. B. Smith, Wyoming.

Lycoming County Society—G. A. Poust, Hughesville; J. F. Gordner, A. P. Hull, Montgomery; A. F. Hardt, Williamsport.

McKEAN COUNTY SOCIETY—F. DeCaria, J. A. Kervin, Bradford.

MIFFLIN COUNTY SOCIETY—T. H. Smith, Burnham; R. T. Barnett, Lewistown; W. H. Kohler, Milroy; C. J. Stambaugh, Reedsville.

MONTGOMERY COUNTY SOCIETY—G. R. Irwin, Bridgeport; W. Z. Anders, Collegeville; W. C. Sheehan, Chestnut Hill; H. H. Drake, J. T. MacDonald, G. W. Miller, W. G. Miller, Norristown; J. E. Gotwals, Phœnixville; N. K. Rahn, Souderton.

NORTHAMPTON COUNTY SOCIETY—W. L. Estes, W. L. Estes, Jr., W. A. Finady, G. A. Petrulias, D. K. Santee, H. J. Schmoyer, W. P. Walker, Bethlehem; J. A. Belts, C. D. Hummel, K. W. Kressler, Easton.

NORTHUMBERLAND COUNTY SOCIETY—H. B. Buczko, Mt. Carmel; L. M. Holt, Shamokin; W. T. Graham, Sunbury.

PERRY COUNTY SOCIETY—F. Patterson, Huntingdon.

PHILADELPHIA COUNTY SOCIETY—S. C. Basney, Glenside; F. R. Sprague, Haverford; G. D. Morton, Honey Brook; L. C. Scheffey, Lansdowne; W. H. Thomas, Mt. Airy; J. C. Applegate, J. O. Arnold, J. Aspel, G. M. Astley, J. H. Baldwin, K. W. Baldwin, C. R. Baum, E. W. Beach, J. B. Becker, M. Behrend, B. R. Beltran, P. B. Bland, F. B. Block, F. F. Borzel, F. E. Boston, G. M. Boyd, M. B. Brenner, J. A. Brooke, S. A. Brumm, A. E. Burke, H. S. Carmany, J. B. Carnett, J. F. Carrell, I. J. Carp, F. S. Chambers, M. J. Costello, K. L. Curd, G. M. Dorrance, J. L. Dukes, L. S. Dunn, L. D. Englerth, W. J. Ezickson, J. B. Flick, A. First, J. M. Fisher, M. K. Fisher, H. G. Fretz, J. Gilbride, W. R. Gilmour, J. H. Girvin, S. B. Goldsmith, F. C. Hammond, H. R. Hawthorne, L. J. Hammond, A. Hewson, H. Z. Hibshmann, R. H. Ivy, G. E. Johnson, J. Jopson, J. A. Kelly, W. H. Kinney, N. L. Knipe, W. Krusen, G. M. Laws, W. E. Lee, B. Leff, J. W. Levering, G. Lloyd, S. H. Lockrey, V. A. Loeb, D. Longaker, C. B. Longenecker, C. B. Lull, J. F. McCahey, J. Q. McDougald, J. A. McGlinn, J. K. McShane, F. H. Maier, B. Mann, J. P. Mann, J. K. Marks, C. F. Martin, E. Martin, H. C. Masland, C. Mazer, J. B. Mencke, C. F. Mitchell, R. W. Mohler, J. G. Moore, S. W. Moorehead, E. E. Montgomery, W. F. Morrison, G. P. Muller, H. R. Owen, G. W. Outerbridge, W. E. Parke, E. L. Peck, P. S. Pelouze, J. Peoples, G. E. Pfahler, J. S. Raudenbush, I. S. Ravdin, E. T. Reedy, C. B. Reynolds, J. L. Richards, J. F. Roederer, J. S. Rodman, P. S. Rosenblum, J. T. Rugh, M. Sabol, J. H. Schoenfeld, F. S. Schofield, C. Schumann, E. T. Scott, H. K. Seelaus, M. Segal, R. C. Seipel, C. H. P. Slaughter, C. D. Smith, R. I. Smith, C. M. Smyth, Jr., S. D. Spotts, J. Speese, T. Sprissler, C. J. Stamm, C. M. Stimson, I. P. Strittmatter, H. A. Sutton, B. A. Thomas, T. T. Thomas, S. E. Tracy, J. P. Turner, M. P. Warmuth, J. R. Wells, F. White, F. R. Widdowson, M. J. Winston, L. J. Wojczynski, C. H. Young, Philadelphia; C. Jackson, Schwenkville.

SCHUYLKILL COUNTY SOCIETY—E. E. Shifferstine, Coaldale; G. O. O. Santee, Cressona; A. F. Bronson, Gordon; M. P. Householder, A. S. Ryland, Pottsville; H. Dirschedl, Pottsville; L. D. Heim, Schuylkill.

SUSQUEHANNA COUNTY SOCIETY—H. D. Washburn, Susquehanna.

TIOGA COUNTY SOCIETY—L. G. Cole, Tioga.

UNION COUNTY SOCIETY—J. W. Arbogast, Lewisburg.

VENANGO COUNTY SOCIETY—J. R. Sharp, Oil City.

WARREN COUNTY SOCIETY—H. R. Robertson, Warren.

WASHINGTON COUNTY SOCIETY—A. O. Hindman, Burgettstown; C. L. Harsha, Canonsburg.

WESTMORELAND COUNTY SOCIETY—A. B. Blackburn, Latrobe; C. D. Ambrose, Ligonier; M. W. Horner, Mt. Pleasant.

YORK COUNTY SOCIETY—J. A. Melsheimer, Hanover.

MINUTES OF THE SECTION ON EYE, EAR, NOSE AND THROAT DISEASES

Tuesday, October 12, 1926

The program for the Tuesday afternoon session of the Section on Eye, Ear, Nose and Throat Diseases consisted of a series of dry clinics at the Medico-Chirurgical Hospital, as follows:

"Clinical Demonstration," Dr. Nathan P. Stauffer, Philadelphia; "Temporosphenoidal Abscess, with Operation and Recovery," Dr. Matthew S. Ersner, Philadelphia; "Bilateral Posterior Lenticonus," Dr. William G. Shemeley, Philadelphia; "Simple and Effective Plastic-Flap Method for the Radical Mastoid Operation," Dr. Henry Dintenfass, Philadelphia; "Postencephalitic Paralysis of Downward Movement and of Convergence," Dr. Warren S. Reese, Philadelphia; "Chronic Frontal Sinusitis, Bilateral, with Fistula of Seven Years' Duration," Dr. Samuel R. Skillern, Philadelphia; "Retro- and Peritonsillar Sarcoma," Dr. Lewis S. Dunn, Philadelphia; "A Type of Severe Nasal Hemorrhage—A New Method of Control," Dr. Herman B. Cohen, Philadelphia; "Another Possible Function of the Sinuses," Dr. Henry A. Laessle, Philadelphia; "Some Recent Clinical Observations," Dr. Frederic M. Strouse, Philadelphia; "Case of Vertical Alternating Strabismus," Dr. Sidney L. Olsho, Philadelphia; "Effect of Light and Color on Glaucoma and Cataract," Dr. Kate W. Baldwin, Philadelphia; "Frontal Sinusitis Resulting in Retrobulbar Neuritis," Dr. Robert J. Hunter, Philadelphia; "Interstitial Keratitis with Rapid Clearing of Corneal Opacities from the Injection of Pregl's Solution," Dr. Alice V. MacKenzie, Philadelphia.

The Section adjourned at 5 p.m.

Wednesday, October 13, 1926

The Section on Eye, Ear, Nose and Throat Diseases convened in the Junior Room of the Bellevue-Stratford Hotel, Philadelphia, at 2 p.m., and was called to order by the Chairman, Dr. Nelson S. Weinberger, of Sayre, who first called for the report of the Executive Committee.

The Executive Committee—Drs. S. MacCuen Smith, Philadelphia; Glendon E. Curry, Pittsburgh, and William Hardin Sears, Huntingdon—recommended the following officers for the ensuing year: Chairman, Dr. Stanley S. Smith, Pittsburgh; Secretary, Dr. Curtis C. Eves, Philadelphia.

Upon motion, duly seconded and carried, Dr. Smith and Dr. Eves were elected.

Dr. Edward Stieren, Pittsburgh, read a paper entitled "The Intensive Use of Dionin in Ophthalmology." Dr. Jay G. Linn, Pittsburgh, read a paper entitled "Observation on the Intensive Use of Dionin." These papers were discussed by Drs. Edward B. Heckel, Pittsburgh; Conrad Berens, New York; J. F. Klinedinst, York; Charles M. Stiles, Philadelphia; Clinton J. Kistler, Lehighton; and the discussion closed by Drs. Jay G. Linn and Edward Stieren.

Dr. Conrad Berens, New York, read a paper entitled "Relationship of Ophthalmology to Immunology." This paper was discussed by Drs. Luther C. Peter, Philadelphia; John C. McAllister, Ridgway, and the discussion closed by Dr. Conrad Berens.

On motion of Dr. Edward B. Heckel, a vote of thanks was extended to Dr. Berens for his presentation.

Dr. Glendon E. Curry, Pittsburgh, read a paper entitled "Hemangioma of the Orbit." This paper was discussed by Dr. William Zentmayer, Philadelphia; Burton D. Chance, Philadelphia; Edward Stieren, Pittsburgh; Conrad Berens, New York City; and the discussion was closed by Dr. Glendon E. Curry.

The Section adjourned.

Thursday, October 14, 1926

The Section on Eye, Ear, Nose and Throat Diseases convened on the Roof Garden of the Bellevue-Stratford, Philadelphia, at 9:20 a.m., and was called to order by the Chairman, Dr. Nelson S. Weinberger.

The following papers were read: "The Anatomic and Histologic Study of the Superficial and Deep Lymphatics of the Hypopharynx," by Dr. Clarence A. Crumrine"; and "A Study of the Superficial and Deep Lymphoid Tissues of the Hypopharynx," by Dr. John B. McMurray, Washington. These papers were discussed by Dr. George L. Tobey, Jr., Boston; Dr. David L. Giarth, Ford City; Dr. George F. Gracey, Harrisburg; Dr. Henry S. Wieder, Philadelphia; Dr. John B. McMurray and Dr. Clarence A. Crumrine.

Dr. George L. Tobey, Jr., Boston, Mass., then addressed the Section on the subject of "Diagnosis of Chronic Otorrhea."

On motion of Dr. Stanley S. Smith, a vote of thanks was tendered Dr. Tobey for his presentation.

The following case reports were presented:

"Double Mastoiditis with Lateral-Sinus Thrombosis, Following Scarlet Fever," Dr. H. Hershey Farnsler, Harrisburg; "Sphenopalatine-Ganglion Treatment of Certain Nose Conditions, Demonstrating a New Needle for Injecting this Ganglion," Dr. Walter D. Chase, Bethlehem: "Carcinoma of the Tonsil," Dr. Walter E. Brown, Pittsburgh; "A Report on Recent Inventions Directed Toward the Relief of the Problems of the Deafened," Dr. Douglas Macfarlan, Philadelphia; "Mastoiditis Without Apparent Middle-Ear Involvement," Dr. William Hardin Sears, Huntingdon.

In the last period of the Thursday morning session, "Nose, Throat and Ear Findings in over 8,000 Freshman College Students," were reported by Drs. Philip S. Stout, Philadelphia; R. Tait McKenzie, and Douglas Macfarlan, Philadelphia. These reports were discussed by Drs. Marion H. Ray, Philadelphia, and David L. Giarth, Ford City.

The Section adjourned *sine die*.

NELSON S. WEINBERGER, *Chairman,*
ROBERT F. RIDPATH, *Secretary.*

Members Registered in Eye, Ear, Nose and Throat Section

ALLEGHENY COUNTY SOCIETY—L. L. Cooper, Crafton; A. Hunter, McKeesport; T. E. McConnell, New Kensington; W. E. Brown, G. E. Curry, E. B. Heckel, C. J. Jaquish, J. G. Linn, C. E. McKee, J. S. Moyer, E. Stieren, Pittsburgh; J. F. Hunter, Turtle Creek; C. A. Lauffer, Wilkinsburg.

ARMSTRONG COUNTY SOCIETY—D. I. Giarth, Ford City.

BERKS COUNTY SOCIETY—L. C. Darrah, C. S. Keiser, Reading.

BLAIR COUNTY SOCIETY—S. P. Glover, Altoona; W. E. Preston, Hollidaysburg.

BRADFORD COUNTY SOCIETY—N. S. Weinberger; P. N. Barker, Troy.

BUCKS COUNTY SOCIETY—J. A. Weierbach, Quakertown.

CAMBRIA COUNTY SOCIETY—C. M. Harris, S. S. Kring, R. Parker, Johnstown; J. F. Buzzard, Philadelphia.

CARBON COUNTY SOCIETY—C. J. Kistler, Lehighton; E. G. Bray, East Mauch Chunk.

CENTER COUNTY SOCIETY—H. Morrow, Center Hall; J. V. Foster, State College.

CHESTER COUNTY SOCIETY—H. A. Rothrock, West-Chester.

CLEARFIELD COUNTY SOCIETY—A. L. Benson, Philipsburg.

COLUMBIA COUNTY SOCIETY—M. W. Freas, Berwick; H. Bierman, Bloomsburg.

CRAWFORD COUNTY SOCIETY—W. W. Shaffer, Meadville; C. Cooke, Titusville.

CUMBERLAND COUNTY SOCIETY—P. W. Wagoner, Carlisle.

DAUPHIN COUNTY SOCIETY—C. C. Cocklin, G. F. Gracey, H. H. Farnsler, J. W. Shaffer, Harrisburg; F. E. Kraker, Media; H. W. George, Middletown.

DELAWARE COUNTY SOCIETY—A. V. Orr, G. H. Cross, C. I. Stiteler, A. L. Ussett, Chester; D. J. Langton, Clifton Heights.

ELK COUNTY SOCIETY—J. C. McAllister, Ridgway.

FAYETTE COUNTY SOCIETY—W. J. Bailey, H. J. Byron, Connellsville; G. H. Hess, D. E. Lowe, Uniontown.

FRANKLIN COUNTY SOCIETY—F. N. Emmert, E. M. Russell, H. M. Stewart, Chambersburg.

HUNTINGDON COUNTY SOCIETY—W. H. Sears, Huntingdon.

INDIANA COUNTY SOCIETY—T. J. McNelis, Mt. Carmel.

LACKAWANNA COUNTY SOCIETY—F. J. Bishop, J. P. Donahoe, C. L. Frey, F. P. Hollister, C. D. Miller, L. G. Redding, M. M. Rosenberg, Scranton.

LANCASTER COUNTY SOCIETY—W. G. Fox, W. B. Hamaker, J. P. Roebuck, E. J. Stein, Lancaster.

LEHIGH COUNTY SOCIETY—W. J. Hertz, G. F. Seiberling, Allentown; W. J. Backenstoe, Emaus.

LUZERNE COUNTY SOCIETY—J. J. Dailey, McAdoo; P. R. Gagion, C. E. Nicholson, Pittston; L. T. Buckman, L. H. Taylor, Wilkes-Barre.

LYCOMING COUNTY SOCIETY—J. C. Brown, H. P. Haskin, W. Kunkel, W. H. Rote, J. B. Nutt, Williamsport.

MERCER COUNTY SOCIETY—E. MacBride, Sharon.

MIFFLIN COUNTY SOCIETY—J. G. Koshland, Lewistown.

MONTGOMERY COUNTY SOCIETY—H. P. Lakin, Lansdale; G. L. Hoffman, F. C. Parker, Norristown; C. Carpenter, Wayne.

MONTOUR COUNTY SOCIETY—R. Nebinger, Danville.

NORTHAMPTON COUNTY SOCIETY—J. E. James, P. H. Kleinhans, Bethlehem; T. E. Swan, Easton.

NORTHUMBERLAND COUNTY SOCIETY—H. M. Becker, W. S. Wentzel, Sunbury.

PHILADELPHIA COUNTY SOCIETY—B. Whaland, Bridgeton, N. J.; E. F. Hemminger, Coatesville; L. Curtis, Lansdowne; P. L. Balentine, Marion; W. H. Annesley, L. F. Appleman, J. A. Babbitt, A. Barlow, R. W. Bemis, J. A. Bertolet, C. C. Biedert, A. L. Bishop, N. M. Brinkerhoff, S. H. Brown, J. T. Bunting, L. J. Burns, M. Buchanan, M. M. Butt, B. Chance, L. H. Clerf, G. M. Coates, H. B. Cohen, J. W. Croskey, T. R. Currie, T. C. Davis, W. H. Deardorff, J. H. Dewey, H. N. Diamond, R. T. M. Donnelly, H. M. T. Dougherty, F. Embery, M. S. Ersner, C. C. Eves, L. Fisher, C. P. Franklin, J. S. Fritch, I. A. Gassman, R. Getelman, H. M. Goddard, H. G. Goldberg, J. I. Gouterman, H. I. Gowens, Jr., J. M. Griscom, W. D. W. Hall, E. G. Hawman, W. Hartz, C. R. Heed, W.

Hewson, W. M. Hinkle, O. C. Hirst, A. F. Hofkin, R. H. Hunter, C. J. Jones, F. B. Kehler, J. C. Keller, J. C. Knipe, E. B. Krumbhaar, G. A. Lawrence, J. E. Loftus, R. M. Lukens, L. Lehrfeld, A. McGinnis, C. E. McKee, W. H. MacKay, B. H. Mann, G. M. Marshall, F. W. Meng, O. F. Mershon, E. B. Miller, M. V. Miller, S. Mitterling, W. F. Moore, S. W. Newmayer, S. L. Olsho, L. C. Peter, M. Platt, P. J. Pontius, C. A. Pryor, B. A. Randall, A. A. Renninger, J. J. Repp, R. F. Ridpath, G. O. Ring, J. C. Rommel, J. B. Rudolphy, W. J. Ryan, A. C. Sautter, E. S. Saylor, H. A. Schatz, W. J. Sener, C. E. G. Shannon, G. E. Shaffer, E. A. Shumway, B. J. Shuster, J. J. Simkins, H. O. Sloane, M. Smith, S. McC. Smith, C. M. Stiles, G. C. Stout, P. S. Stout, F. M. Strouse, C. J. Swalm, W. M. Sweet, G. Tucker, A. J. Wagers, M. A. Warlow, W. N. Watson, R. Watt, M. A. Weinstein, M. A. Zacks, W. Zentmayer, Philadelphia.

SCHUYLKILL COUNTY SOCIETY—T. L. Williams, Mt. Carmel; V. L. Roth, Pottsville, J. J. Monahan, Shenandoah.

SOMERSET COUNTY SOCIETY—R. J. Heffley, Berlin; J. R. Hemminger, Somerset.

VENANGO COUNTY SOCIETY—M. Robb, Oil City.

WARREN COUNTY SOCIETY—M. V. Ball, R. L. Young, Warren.

WASHINGTON COUNTY SOCIETY—J. B. McMurray, Washington.

WESTMORELAND COUNTY SOCIETY—E. L. Piper, Export; P. G. McKelvey, Greensburg; H. R. Mather, Latrobe; A. Waide, Scottdale; J. A. Boale, Vandergrift.

YORK COUNTY SOCIETY—J. F. Klinedinst, S. I. McDowell, York.

MINUTES OF THE SECTION ON PEDIATRICS

Tuesday, October 12, 1926

The Section on Pediatrics convened at the Children's Hospital, Eighteenth and Bainbridge Streets, Philadelphia, at 2 p.m., and was called to order by the Chairman, Dr. Horace H. Jenks, Philadelphia.

During the first period of the afternoon program, the following paper was read: "Demonstration and Discussion of Some Methods of Infant Feeding and of Food Preparation," by Dr. J. P. Crozer Griffith, Philadelphia. The paper was discussed by Dr. Harry Lowenburg, Philadelphia.

During the second period the following papers were read: "Anemias of Childhood" (Lantern Demonstration), by Dr. J. Claxton Gittings, Philadelphia, and Dr. Walter Blair Stewart, Atlantic City, the paper being read by Dr. Stewart; and "Intestinal Parasites" by Drs. Arthur D. Waltz, John D. Donnelly, and Ernest L. Noone, of Philadelphia. These papers were discussed by Dr. J. Claxton Gittings, Philadelphia, Dr. Arthur D. Waltz, Dr. Ernest L. Noone, Philadelphia, and Dr. A. Graeme Mitchell, Cincinnati, Ohio.

During the third period, the following paper was read: "A Comparison of the Clinical Diagnosis of Pneumonia in Infants with the Results of X-Ray Examination and with the Findings at Autopsy" (Lantern Demonstration), by Dr. Alfred Hand, Philadelphia, and an exhibition of patients presenting rare conditions, as follows: diaphragmatic hernia, three brothers with muscular dystrophy, a three-year-old girl recovering from rheumatoid arthritis, diaphysical acclasia, and a case of cervical rib. The paper and cases were discussed by Drs. Hand, Reilly, Bromer, Waltz, J. Claxton Gittings, of Philadelphia.

The Section adjourned at 5:20 p.m. Attendance 81.

Wednesday, October 13, 1926

The Section on Pediatrics convened at 2 p.m., and was called to order by the Chairman, Dr. Horace H. Jenks, Philadelphia.

In the "Symposium on Scarlet Fever" the following subjects were discussed: "Etiology, Diagnosis, and Non-serum Treatment," by Dr. James K. Everhart, Pittsburgh, and "Serological Treatment," by Dr. E. L. Bauer, Philadelphia. General discussion by Dr. James M. Johnston, Huntingdon, Dr. J. L. Foster, Pittsburgh, and Dr. A. L. Dewees, Haverford.

The Executive Committee reported that the following officers were nominated to serve for the coming year: Chairman, Dr. Fred E. Ross, Erie; Secretary, Dr. Z. R. Scott, Pittsburgh. Upon motion duly seconded and carried Dr. Ross and Dr. Scott were elected.

During the second period two papers were read on "Summer Diarrhea in Infants," by Dr. Robert K. Rewalt, Williamsport, and Dr. J. Gibson Logue, Williamsport. The papers were discussed by Dr. J. Claxton Gittings, Philadelphia, Dr. Percival Nicholson, Ardmore, Dr. C. M. Tyson, Dr. Arthur M. Dannenberg, Philadelphia, Dr. Daniel E. Berney, Scranton, Dr. E. L. Bauer, Philadelphia, and Dr. Rewalt.

Dr. A. Graeme Mitchell of Cincinnati, Ohio, then addressed the Section on the subject of "Focal Infections in Children."

The Section adjourned at 5 p.m. Attendance 134.

Thursday, October 14, 1926

The Section on Pediatrics convened at 9 a.m., and was called to order by the Chairman, Dr. Horace H. Jenks, Philadelphia.

During the first period the following papers were read: "Traumatism and Its Effect on the Normal Development of the Nervous System in Children" (Lantern Demonstration), by Dr. Charles H. Henninger, Pittsburgh; and "Orthopedic Treatment of Cerebral Spastic Paralysis," by Dr. William O. Markell, Pittsburgh. These papers were discussed by Dr. Horace H. Jenks, Philadelphia, and Dr. Henninger in closing.

In the "Symposium on Encephalitis and Its Effect on the Behaviour of Children" the following papers were read: "An Intensive Study of a Group of Postencephalitic Boys in a Hospital School" (Lantern Demonstration), by Dr. Daniel H. Fuller, Philadelphia; "Diagnosis of Postencephalitic Conditions," by Dr. Edward A. Strecker, Philadelphia; and "General Considerations of Encephalitis as They Affect the Medical Profession," by Dr. Earl D. Bond, Philadelphia. These papers were discussed by Dr. Adam J. Simpson, Chester; Dr. William C. Sandy, Dr. J. Bruce McCreary, Harrisburg, and Dr. Walter Freeman, Washington, D. C.

The following case reports were presented: "Rat-Bite Fever," by Dr. James L. Foster, Pittsburgh; "Persistent Tachycardia in a Three-Year-Old Child," by Dr. W. Frederick Mayer, Johnstown; "An Unusual Case of Appendicitis in a Child," by Dr. Frank Keagy, Altoona; "Enlargement of the Liver in a Three-Year-Old Child with a History of Alcoholism," by Dr. Theodore J. Elterich, Pittsburgh; "Bromid Eruption with Scarring," by Dr. Frederick M. Jacob, Pittsburgh; "Thymic Death in a Case with no Previous Symptoms and X-Ray Negative," by Dr. Daniel E. Berney, Scranton; "Pennsylvania's Progress in Diphtheria," by Dr. J. Bruce McCreary, Chief of Bureau of Child Health, Harrisburg; "The Supervision of Midwives in the Coal Region," by Dr. Mary Riggs Noble, Chief of Preschool Section, Bureau of Child Health, Harrisburg. There was no discussion of these reports.

Dr. Isaac A. Abt of Chicago, a guest speaker, then

addressed the Section on the subject of "The Purpuric Diseases in Childhood."

The Section adjourned at 1 p.m. Attendance 101.

Horace H. Jenks, *Chairman,*
Zaccheus R. Scott, *Secretary.*

Members Registered in Section on Pediatrics

Adams County Society—M. S. Weaver, Gettysburg.

Allegheny County Society—J. B. Feeley, McKeesport; T. J. Elterich, J. K. Everhart, J. D. Iams, J. L. Foster, Z. R. Scott, Pittsburgh.

Bedford County Society—C. C. Cooner, Bedford.

Berks County Society—H. P. Brunner, LeR. W. Frederick, G. W. Overholser, Reading.

Blair County Society—F. Keagy, Altoona.

Bradford County Society—J. M. Higgins, Sayre; P. H. Schwartz, Towanda.

Bucks County Society—L. S. Walton, Jenkintown.

Cambria County Society—A. M. Bergstein, Gallitzin; W. F. Mayer, Johnstown; G. C. Berkheimer, Windber.

Chester County Society—G. E. Dietrich, M. Margolies, Coatesville.

Clearfield County Society—R. L. Williams, Houtzdale.

Crawford County Society—C. W. Hazen, J. C. Wilson, Titusville.

Cumberland County Society—H. C. Lawton, Camp Hill; N. W. Hershner, R. R. Spahr, Mechanicsburg; J. B. McCreary, Shippensburg.

Dauphin County Society—H. R. Douglas, R. J. Miller, M. R. Noble, W. C. Sandy, Harrisburg; J. W. Horn, Hummelstown; D. E. Hottenstein, Millersburg; J. R. Plank, Steelton.

Delaware County Society—R. B. Loughead, K. Ulrich, A. E. White, Chester; G. F. Crothers, Marcus Hook; J. H. Fronfield, Media; R. T. Devereux, Swarthmore.

Fayette County Society—J. D. Sturgeon, Jr., Uniontown.

Franklin County Society—T. Peters, S. B. Thomas, Waynesboro.

Lackawanna County Society—D. E. Berney, A. L. Levy, J. C. Wahl, Scranton.

Lancaster County Society—H. B. Roop, Columbia; T. M. Thompson, Elizabethtown; D. W. Draper, W. J. Leaman, E. K. Smith, G. W. Stohler, Lancaster; M. H. Yoder, Lititz.

Lebanon County Society—J. DeW. Kerr, Lebanon; S. D. Bashore, Palmyra.

Lehigh County Society—F. R. Bausch, M. Kemp, R. F. Merkle, D. H. Parmet, Allentown; W. J. Lowright, Center Valley; W. A. Backenstoe, Emaus; H. B. Kern, Slatington.

Luzerne County Society—J. S. Crater, Hazleton; H. Rubenstein, Pittston; C. H. Phillips, E. L. Moyer, F. T. O'Donnell, Wilkes-Barre.

Lycoming County Society—P. A. Bay, Jersey Shore; J. G. Logue, R. K. Rewalt, E. T. Williams, Williamsport.

Mifflin County Society—H. E. Miller, Mifflin.

Monroe County Society—C. S. Flagler, Stroudsburg.

Montgomery County Society—P. Nicholson, Ardmore; A. L. Dewees, Haverford; H. A. Bostock, W. R. Roberts, Norristown; P. H. Corson, Cynwyd; R. S. Heffner, Pottstown; J. K. W. Wood, Willow Grove.

Northumberland County Society—O. E. Salters, Shamokin.

Philadelphia County Society—C. B. Farr, Bryn Mawr; A. D. Waltz, Drexel Hill; J. D. Donnelly, Cynwyd; F. S. Ferris, Glenside; D. Child, Germantown; G. H. Atkins, H. S. Bachman, E. P. Bacon, H. Barenblatt, C. S. S. Barnes, E. L. Bauer, L. F. Bender, E. D. Bond, I. Binder, W. N. Bradley, H. B. Carpenter, H. C. Carpenter, F. M. Cleveland, M. S. Cohen, A. M. Dannenberg, A. H. B. Drake, E. L. Drake, R. L. Engle, C. A. Fife, M. Finkelstein, F. Fraley, E. M. Freas, J. C. Gittings, H. Golden, H. W. Goos, E. E. Graham, M. Green, J. P. C. Griffith, A. Hand, E. M. Hughes, H. Jenks, T. C. Kelly, F. H. Leavitt, J. D. Leebron, C. H. Lefcoe, I. V. Levi, J. H. Lloyd, H. Lowenburg, D. R. MacCarroll, N. M. MacNeill, J. H. McKee, J. M. McKee, T. Melnick, I. S. Meyerhoff, J. B. Mills, E. J. Morris, J. Neff, M. O'Harrow, H. S. Orloff, C. E. Price, S. Radbill, B. F. Royer, R. Rubin, S. Rubin, M. P. Ryan, W. S. Schwartz, F. M. S. Sharpe, J. F. Sinclair, H. S. Snyderman, S. Singer, E. A. Strecker, C. N. Sturtevant, A. E. Siegel, L. S. Somers, E. S. Thorpe, Jr., S. S. Woody, F. A. Weigand, R. P. Wilkinson, R. V. Zabarkes, Philadelphia.

Schuylkill County Society—A. Lebendig, Shenandoah.

Somerset County Society—F. B. Shaffer, Somerset.

Warren County Society—R. H. Knapp, Youngsville.

Washington County Society—C. C. Cracraft, Claysville.

York County Society—F. C. Lepperd, Hanover; C. W. Eisenhower, York.

MINUTES OF THE SECTION ON DERMATOLOGY

Tuesday, October 12, 1926

The Section on Dermatology convened in the Junior Room, Bellevue-Stratford Hotel, Philadelphia, at 3 p.m., and was called to order by the Chairman, Dr. Fred D. Weidman.

In the "Symposium on Dermatology in Relation to Internal Medicine," the following papers were read: "Dermatologic Leads to Internal Medical Diagnosis," by Dr. Lorraine L. Schwartz, Pittsburgh; "The Etiology and Treatment of Generalized Pruritus," by Dr. Carrol S. Wright, Philadelphia; and "Drug Eruptions," by Dr. William H. Guy, Pittsburgh. These papers were discussed by Dr. L. Hollander, Pittsburgh; Dr. Knowles, and Dr. Weidman, Philadelphia.

Dr. Howard Fox, Professor of Dermatology and Syphilology, New York University, then addressed the Section on the subject of "Some Fungus Infections of the Skin and Appendages."

During the next period the following papers were read: "Diseases of the Skin in Childhood of Internal Causation," by Dr. Frank C. Knowles, Philadelphia; "Hyperemias of the Skin Associated with Internal Conditions," by Dr. Abram Strauss, Philadelphia; and "Leg Ulcers," by Dr. John W. Barr, Johnstown. These papers were discussed by Dr. W. H. Guy, Pittsburgh; Dr. F. M. Jacob, Pittsburgh; Dr. C. C. Knowles, Philadelphia; and Dr. P. E. Biggins, Sharpsville.

The Nominating Committee—Dr. F. M. Jacob, Pittsburgh; Dr. C. S. Wright, Philadelphia, and Dr. J. W. Barr, Johnstown—reported that the following officers were nominated to serve for the coming year: Chairman, Dr. Joseph V. Klauder, Philadelphia; Vice-Chairman, Dr. Rose Hirschler, Philadelphia; Secretary, Dr. Lester Hollander, Pittsburgh. Upon motion, duly

seconded and carried, Dr. Klauder, Dr. Hirschler, and Dr. Hollander were unanimously elected.

The Section adjourned at 6 p.m.

FRED D. WEIDMAN, *Chairman,*
JOSEPH V. KLAUDER, *Secretary.*

Members Registered in Section on Dermatology

ALLEGHENY COUNTY SOCIETY—L. G. Beinhauer, S. Crawford, W. H. Guy, L. Hollander, F. M. Jacob, L. L. Schwartz, H. G. Wertheimer, Pittsburgh.

BERKS COUNTY SOCIETY—D. S. Grim, F. P. Werner, Reading.

CAMBRIA COUNTY SOCIETY—J. W. Barr, Johnstown.

DAUPHIN COUNTY SOCIETY—P. A. Deckard, S. J. Roberts, Harrisburg.

DELAWARE COUNTY SOCIETY—L. Gottschalk, Marcus Hook.

ERIE COUNTY SOCIETY—E. Steinberg, Erie.

FAYETTE COUNTY SOCIETY—H. A. Heise, Uniontown.

LACKAWANNA COUNTY SOCIETY—J. D. Butzner, E. A. Curtin, Scranton.

LANCASTER COUNTY SOCIETY—J. F. Mentzer, Ephrata; R. D. Swab, Lancaster.

LUZERNE COUNTY SOCIETY—O. C. Reiche, Hazleton.

LYCOMING COUNTY SOCIETY—A. C. Lamade, Williamsport.

MONTGOMERY COUNTY SOCIETY—P. W. McLaughlin, Norristown.

PHILADELPHIA COUNTY SOCIETY—L. Baer, E. S. Cooke, M. Cornfeld, R. Friedman, S. S. Greenbaum, E. M. Hewish, R. Hirschler, B. L. Kahn, J. V. Klauder, F. C. Knowles, H. G. Munson, J. F. Schamberg, J. H. Stokes, F. W. Weidman, Philadelphia.

SCHUYLKILL COUNTY SOCIETY—W. Dzurek, Pottsville.

WASHINGTON COUNTY SOCIETY—J. J. McCarthy, Avella.

YORK COUNTY SOCIETY—S. K. Pfaltzgraff, York.

Registration by Counties

Adams—6
Allegheny—88
Armstrong—5
Beaver—5
Bedford—4
Berks—30
Blair—12
Bradford—11
Bucks—15
Butler—1
Cambria—30
Carbon—4
Center—5
Chester—22
Clarion—1
Clearfield—17
Clinton—4
Columbia—6
Crawford—8
Cumberland—6
Dauphin—43
Delaware—32
Elk—4
Erie—3
Fayette—21
Franklin—11
Greene—4
Huntingdon—8
Indiana—6
Jefferson—6
Juniata—0
Lackawanna—35
Lancaster—41
Lawrence—1
Lebanon—7
Lehigh—23
Luzerne—33
Lycoming—36
McKean—3
Mercer—6
Mifflin—10
Monroe—2
Montgomery—39
Montour—7
Northampton—29
Northumberland—14
Perry—2
Philadelphia—485
Potter—1
Schuylkill—24
Snyder—2
Somerset—5
Sullivan—0
Susquehanna—2
Tioga—5
Union—3
Venango—4
Warren—9
Washington—8
Wayne—0
Westmoreland—11
Wyoming—1
York—12

Delegates From Other Societies

Wendell C. Phillips, President, American Medical Association; W. Blair Stewart, Medical Society of New Jersey; Henri P. Linsz, West Virginia State Medical Association; Ambrose Hunsberger, W. L. Cliffe, Pennsylvania Pharmaceutical Association; John A. Foote, Medical Society of the District of Columbia; Emerson Sausser, State Dental Society.

Registered Visitors

Adalberto Aviles, Mexico City; C. Bartholomew, Captain, M. C., U. S. A., Boston Harbor, Mass.; B. W. Black, Washington, D. C.; Joseph Colt Bloodgood, Baltimore, Md.; William Paul Brown, Olean, N. Y.; Albert M. Cross, Skillman, N. J.; Howard P. Daub, Detroit, Mich.; Deborah Doan, Trenton, Mo.; Percy W. Drufus, Lt. Com'd, M. C., U. S. Navy, Philadelphia, Pa.; J. L. Fisher, Youngstown, Ohio; Edward Francis, Washington, D. C.; Nan L. Gilkerson, Amarillo, Texas; B. B. Halliburton, Toledo, Ohio; Izquierdo Jose Joaquin, Mexico City; Howard T. Karnser, Cleveland, Ohio; E. C. Kendall, Rochester, Minn.; Alice T. Lyle, Cincinnati, Ohio; E. A. MacCormack, Peru, S. America; LeRoy M. A. Maeder, Minneapolis, Minn.; Burton R. Miller, Tiffin, Ohio; F. H. Morton, Salt Lake City, Utah; E. R. Mulford, Burlington, N. J.; Verner Nisbet, Van Wyck, S. C.; H. C. Pederson, Fremont, Neb.; B. S. Rankin, Tunnelton, W. Va.; William M. Reser, Lafayette, Ind.; Osorino Servando, Mexico City; Paul R. Stalnaker, Commander, M. C., U. S. Navy, Philadelphia, Pa.; William J. Tindall, New York, N. Y.; George T. Tracy, Beverly, N. J.; Raymond A. Tomassene, Wheeling, W. Va.; R. F. Turlington, Birmingham, Ala.; D. E. Ushkow, New York, N. Y.; Adelaide E. Weston, Jamestown, N. Y.; Paul Weston, Jamestown, N. Y.

Women Visitors Registered

Allegheny—29
Adams—2
Armstrong—2
Beaver—6
Bedford—3
Berks—7
Blair—6
Bradford—9
Bucks—7
Butler—2
Cambria—21
Carbon—2
Center—2
Chester—2
Clarion—11
Clearfield—17
Clinton—4
Columbia—8
Crawford—8
Cumberland—2
Dauphin—27
Delaware—16
Erie—4
Fayette—11
Franklin—9
Greene—3
Huntingdon—11
Indiana—1
Jefferson—7
Lackawanna—25
Lancaster—19
Lawrence—1
Lebanon—6
Lehigh—17
Luzerne—19
Lycoming—30
McKean—2
Mercer—2
Mifflin—8
Monroe—1
Montgomery—17
Montour—3
Northampton—9
Northumberland—3
Perry—2
Schuylkill—27
Snyder—1
Somerset—4
Susquehanna—1
Tioga—2
Union—2
Venango—4
Warren—10
Washington—8
Westmoreland—8
Wyoming—1
York—13
Total—484

MINUTES OF THE SECRETARIES' CONFERENCE

The Twenty-first Annual Conference of the Secretaries of the component county medical societies of the Medical Society of the State of Pennsylvania was called to order at 5 p.m., in the Roof Garden of the Bellevue-Stratford Hotel, Philadelphia, on Tuesday, October 12, 1926, by the Chairman, Charles P. Stahr, Secretary of the Lancaster County Medical Society.

The minutes of the 1925 meeting were read and approved.

A nominating committee consisting of Dr. J. T. Butz, Dr. P. A. Noll, and Dr. Walter S. Brenholtz was appointed by the Chairman to nominate officers for the 1927 Secretaries' Conference.

The following program was presented:

1. "The Economic Aspect of Nurses' Activities in Medical Practice," by P. A. Noll, Secretary of the York County Medical Society.

2. "The Duties of a Member of a County Medical Society, and How He Can Make His Society a Success," by Walter S. Brenholtz, Secretary of the Lycoming County Medical Socicty.

3. "Reaction to Nine Months' Operation of the Pennsylvania Annual Registration Law." Reports on this subject were received from several county society secretaries, and were discussed by Dr. Walter E. Lee of Philadelphia, a member of the Board of Medical Education and Licensure of Pennsylvania.

After the dinner which followed the Conference, Dr. Wendell C. Phillips, President of the American Medical Association, gave an address.

The Nominating Committee reported as follows and nominees were declared duly elected: *Chairman*, Dr. Henry G. Munson, Philadelphia, Secretary Philadelphia County Medical Society; *Secretary*, Dr. John M. Beck, Alexandria, Secretary Huntingdon County Medical Society. *Executive Committee:* Dr. Edward W. Bixby, Wilkes-Barre, Secretary Luzerne County Medical Society; Dr. Charles C. Cracraft, Claysville, Secretary Washington County Medical Society; Dr. Samuel G. Logan, Ridgway, Secretary Elk County Medical Society.

There were present thirty-one component county society secretaries, nine officers of the State Society, and ten guests, as follows: J. B. F. Wyant, Armstrong County; John A. Livingood, Berks County; Anthony F. Myers, Bucks County; Jacob A. Trexler, Carbon County; Joseph Scattergood, Chester County; Charles C. Ross, Clarion County; John M. Quigley, Clearfield County; Edgar J. Werle, Crawford County; Richard R Spahr, Cumberland County; Walter E. Egbert, Delaware County; Samuel G. Logan, Elk County; George H. Robinson, Fayette County; Ambrose W. Thrush, Franklin County; John M. Beck, Huntingdon County; James O'Toole, Lackawanna County; Charles P. Stahr, Lancaster County; William A. Womer, Lawrence County; J. Treichler Butz, Lehigh County; Edward W. Bixby, Luzerne County; Walter S. Brenholtz, Lycoming County; Francis De Caria, McKean County; Edith MacBride, Mercer County; James A. C. Clarkson, Mifflin County; Edgar S. Buyers, Montgomery County; Victor S. Messinger, Northampton County; Henry G. Munson, Philadelphia County; Arthur B Fleming, Schuylkill County; Roy L. Young, Warren County; Charles C. Cracraft, Washington County; Charles D. Ambrose, Westmoreland County; Pius A. Noll, York County; President Ira G. Shoemaker, Reading; President-Elect Harry W Alberston, Scranton; Christian B. Longenecker, Philadelphia; Walter F. Donaldson, Pittsburgh; Frederick J. Bishop, Scranton; Theodore B. Appel, Lancaster; Howard C. Frontz, Huntingdon; Frank C. Hammond, Philadelphia; William T. Sharpless, West Chester; Wendell C. Phillips, President of the American Medical Association; Walter E. Lee, Philadelphia; John W. Croskey, Philadelphia; Howard M. Leinbach, Reading; David I. Giarth, Ford City; Lewis H. Taylor, Wilkes-Barre; John A. Campbell, Williamsport; Charles J. Stambaugh, Reedsville; Thomas H. Smith, Burnham; Harry R. Albertson, Scranton.

Walter E. Egbert, *Secretary.*

REPORT OF COMMITTEE ON PRESENT STATUS OF PHYSICAL THERAPY*

Physical therapy is a term employed to define the treatment of disease by various nonmedicinal means. It comprises the use of the physical, chemical, and other properties of heat, light, water, electricity, massage, and exercise. There are certain definite indications for the use of some one or a combination of several of these physical agencies in the treatment of disease, but to depend on these agencies solely, to use them in lieu of better proved methods, or to employ them without having first thoroughly studied the patient from the standpoint of diagnosis, is harmful practice.

Some physical agencies may be used on the theory that "they will do no harm and may do some good." The psychologic element in their use impresses the patient, usually beneficially but occasionally to his detriment. The use of a certain method may become a habit with the patient, the physician, or the technical assistant, so that the course of treatment is prolonged unduly. Again, manufacturers' agents—salesmen absolutely untrained in medical science—visit physicians, extolling the virtues of special physical apparatus, making unfounded claims as to curative values, and emphasizing the money-making powers of these methods of treatment.

Physical therapy came into its legitimate place in medicine during the World War. Today it is gradually taking its place with the usual medical and surgical procedures. But unless we guard against bad habits in its usage, against allowing it to replace careful diagnostic measures followed by well defined but less spectacular methods of treatment, and especially unless we guard against its insidious tendency to make its master an easy living, physical therapy may lead into dishonest practice or quackery.

The physical measures that have been found to have certain therapeutic value both by long clinical experience and by laboratory research include:

1. *Heat, Natural and Artificial.*—Diathermy, hot dry packs, hot water bottle, electric pads, and the combination of heat with light and of heat with hydrotherapy.

2. *Hydrotherapy.*—Hot and cold packs, hot and cold douches, whirlpool baths, swimming pool.

3. *Light.*—Heliotherapy or sunlight; artificial light, as that from a mercury arc quartz lamp, air or water cooled, a carbon or modified carbon arc lamp, and an incandescent lamp; gamma rays of radium; roentgen rays.

4. *Electricity.*—Galvanic, faradic, and sinusoidal currents, static electricity, ionization, and combinations of these.

5. *Massage.*—Manual percussion, stroking, sedative type, brisk kneading type, manipulative as in stretching, pulling, and corrective manipulations.

*This report has been approved by the Council on Physical Therapy of the American Medical Association.

6. *Therapeutic Exercises.*—Muscle-training exercises, passive and active, mechanotherapy, occupational therapy, games.

Physical therapy is at present in a transitional stage. Its use is extending, but it is still violently condemned in toto by some physicians. Experience indicates that a selected combination of physical measures offers the best results in certain pathologic conditions; in other conditions such measures serve as a beneficial adjunct to the usual medical and surgical treatment. Above all, continued treatment by physical measures seems to result in better functional results than when patients are left to their own devices in securing restoration of function.

Many physical measures, however, have served as the chief armamentarium of quacks and charlatans in the past. Moreover, with renewed interest in this subject, cultists have adopted physical measures and have made extravagant unscientific claims as to their value. The avidity with which some have seized on physical therapy solely as a means of financial gain has disgusted most conscientious practitioners of medicine.

The Council on Physical Therapy feels that the following considerations must receive the most careful attention of the medical profession:

1. Physics, physiology, and biochemistry must be called on to dispel the empiricism of the past and to prove the true scientific value of various physical agencies.

2. Physical therapy must be recognized as a definite part of medicine, practiced and controlled by graduate physicians. It should be used only as one of the triad of medicine, surgery, and physical therapy. It should be prescribed only after careful physical and laboratory examinations of the patient have been made. It should never be prescribed except by a physician thoroughly trained in the use of physical agencies.

The treatment of disease, whether by drugs, surgery or physical agents, belongs solely in the realm of medicine. A physician would not refer a patient to a nonmedically trained technician for treatment for either drugs or surgery. Yet many physicians may refer patients to technicians—masseurs, gymnasts, or nurses who have received training in physical therapy, or even to members of various cults for physical therapeutic treatment.

Therefore, physical therapy must be recognized as a component part of medicine, and patients requiring this type of treatment should be referred only to physicians trained in this specialty. In this way the use of these methods by charlatans will be largely eliminated.

3. Since physical therapy is a definite part of medicine, every medical school should give a thorough training in this subject. The paucity of postgraduate and undergraduate instruction in physical measures in our medical schools has placed the profession at a disadvantage. Many attempts have been made to remedy this situation. A subject as intricate as physical therapy requires more study than a salesman's assertion that the snapping of a switch or the pressure of a button will definitely assuage any pathologic change.

The making of physical therapists by courses of one or two weeks, often reeking with commercialism, must be condemned. The three to six weeks' courses, sponsored by reputable medical schools, are frankly makeshifts, but do serve to show the would-be physical therapist the breadth of the subject. At least they effect the realization that such a period suffices only for establishing the purely mechanical details of technic and the broader physiologic groundwork on which, aided by his medical knowledge and common sense, one may attempt to erect a physical therapeutic superstructure. The remedy is adequate instruction to undergraduates in the medical schools. Courses starting with biophysics should be given in the last three years. In the postgraduate schools, more intensive and prolonged courses should be offered. Medical societies should invite physicians specializing in physical measures to give sane, scientific courses in physical therapy to their members. A fair proportion of the scientific programs of medical societies should be assigned for discussion of physical measures of treatment.

4. Persistent, prolonged effort must be made to eradicate the abuses of physical therapy. A physician who has installed a diathermy machine or an ultraviolet-ray generator can do good in carefully selected cases with one of these methods. He is not, however, fully equipped to render physical therapy. As a rule, it is the careful combination of several physical agencies that gives the best results. Again, physicians must guard against the overenthusiastic use of new instruments and the treating of cases for prolonged periods by nurses, technicians, or office assistants.

The training of technicians should be encouraged, for trained technicians are invaluable to physicians specializing in this field. But technicians should be discouraged from establishing individual plants, even though the major part of the work is referred by physicians.

The "treatment habit" is a menace, prevalent in general practice and reaching its zenith in the physical therapeutic departments of civil hospitals. Undesirable and incurable patients may be easily referred to the physical-therapy departments, where they remain long after attaining maximum improvement, to the great disadvantage of acute cases urgently needing such treatment to shorten their time of disability and to secure functional restoration. Under most industrial compensation laws the treatment habit tends to become firmly fixed.

The Council on Physical Therapy of the American Medical Association will endeavor to point out to the medical profession the advantages and the disadvantages of physical therapy so that its abuses may be reduced to a minimum, and its scientific possibilities may be appreciated.—*Journal A. M. A.,* October 16, 1926.

Medical News

Deaths

B. HARRY WARREN, M.D., of West Chester; Jefferson Medical College, 1884; not in practice; October 11.

JOHN B. AGUE, M.D., of Beaver Falls; Bellevue Hospital Medical College, New York City, 1889; October 21.

ROBERT PATTERSON, M.D., of Turtle Creek; University of Pittsburgh School of Medicine, 1913; aged 43; September 30, of chronic endocarditis.

FRANCIS J. SNYDER, M.D., of York; College of Physicans and Surgeons, Baltimore, Md., 1887; aged 62; October 11, of bronchial pneumonia.

WILLIAM KER SHEA, M.D., of Philadelphia; L.R.C.S., Ireland, 1881; L.R.C.P., Edinburgh, Scotland, 1885; aged 68; September 18, of heart disease.

PATRICK H. KEARNEY, M.D., of Archbald; University of Pennsylvania School of Medicine, 1891; aged 68; in August, of acute dilatation of the heart.

EARL HAMPTON BARTLETT, son of Dr. and Mrs. Clarence Bartlett, of Merion and Philadelphia, was killed in an automobile accident in Pittsburgh, October 13.

Edwin H. Kistler, M.D., of Lansford; University of Pennsylvania School of Medicine, 1870; aged 83; oldest practicing physician in Carbon County; September 30.

Alfred J. Hopkins, M.D., of Pittsburgh; McGill University Faculty of Medicine, Montreal, P. Q., Canada, 1883; aged 64; September 7, of acute nephritis and cerebral hemorrhage.

Howard L. Green, M.D., of Bridgeport; Jefferson Medical College, 1897, and the Philadelphia College of Pharmacy; president of the Norristown Board of Health; aged 60; October 9.

Reuben D. Wenrich, M.D., of Wernersville; University of Pennsylvania School of Medicine, 1864; medical superintendent of the Grandview Sanatorium; aged 84; September 25, of arteriosclerosis.

Clarence T. Faries, M.D., of Narberth; Medico-Chirurgical College of Philadelphia, 1895; World War veteran in charge of Base Hospital No. 72; aged 55; October 12, from an acute throat infection.

Wilmon W. Leach, M.D., of Philadelphia; University of Pennsylvania School of Medicine, 1892; for six years served as physician in charge of the Eastern State Penitentiary; aged 55; September 26, of heart disease.

Henry H. Boom, M.D., of Philadelphia; University of Pennsylvania School of Medicine, 1885; Professor of Chemistry, Physics, Metallurgy, and Materia Medica in the School of Dentistry of Temple University; aged 64; October 23.

Daniel A. Webb, M.D., of Scranton; Georgetown University School of Medicine, Washington, D. C., 1896; former president of the Lackawanna County Medical Society; World War veteran; aged 55; September 26, of heart disease.

Harry MacVeagh Brown, M.D., of Philadelphia; University of Pennsylvania School of Medicine, 1895; aged 53; for more than twenty years on the staff of the Presbyterian Hospital, where he died, October 4, of hemorrhage and gastric ulcer.

Elwood E. Shields, M.D., of Annisquan, Mass. (formerly of Germantown); University of Pennsylvania School of Medicine, 1910; aged 41; brother of Dr. William G. Shields, Jr., Germantown; October 8, following an illness of nearly a year.

Births

To Dr. and Mrs. F. Earle Magee, of Oil City, a son, Frank Earle, Jr., August 3.

To Dr. and Mrs. Stephen Dana Weeder, of Philadelphia, a daughter, September 29.

To Dr. and Mrs. Edward Roland Snader, Jr., of Wynnewood, a daughter, Martha McComb, September 24.

To Mr. and Mrs. Richard Paul Rosenau, of Philadelphia, a daughter, Sally Karpeles, October 17. Mrs. Rosenau is the daughter of Dr. and Mrs. M. J. Karpeles.

To Dr. and Mrs. E. Brooks Keffer, of Overbrook, a daughter, September 27. Mrs. Keffer was Miss Dorothy Reading, daughter of Dr. and Mrs. Thomas Reading, of Hatboro.

To Dr. and Mrs. Archibald Malloch, 2d, of New York City, a son, Archibald Malloch, 3d, September 20. Mrs. Malloch was Miss Katherine Abbott, daughter of Dr. and Mrs. A. C. Abbott, of Philadelphia.

Engagements

Miss Margaretta Miller, daughter of the late Governor Charles R. Miller, of Wilmington, Del., to Dr. DeForest P. Willard, of Philadelphia.

Miss Dorothea Johnson, of Pittsburgh, to Dr. Lewis Haler Hitzrot, senior resident in medicine at the University Hospital, Philadelphia.

Miss Jean Falconer Grant, daughter of Mrs. Keith Falconer Grant, of the University of Virginia, to Dr. William Randolph Taylor, son of Dr. and Mrs. William Long Taylor, of Philadelphia.

Marriages

Miss E. Maye Myers, of Julian, to Dr. James F. Hunter, of Turtle Creek, October 7.

Miss Alice Childs, of Norristown, to Dr. John K. Gordon, of Chambersburg, October 21.

Miss Helen Rex MacGowan, of New York City, to Dr. Newlin Fell Paxson, of Philadelphia, October 9.

Miss Margaret Elizabeth Hershey, daughter of Dr. and Mrs. George B. Hershey, of Gap, to Mr. Robert Wayne Boyd, of Parkesburg, August 24.

Miss Anna L. Fell, directress of nurses at the Mary Packer Hospital, Sunbury, to Dr. Joseph Fisher, coroner of Northumberland County, September 18.

Miss Rebecca Pollard, of Hialeah, Fla., to Mr. William B. Van Lennep, 2d, son of Dr. G. A. Van Lennep, surgeon of Hahnemann Hospital, Philadelphia.

Miss Caroline G. Horan, daughter of Hubert J. Horan, president of the Commercial Exchange to Dr. Michael P. Corcoran, of Philadelphia, September 29. Dr. and Mrs. Corcoran are touring Europe.

Miscellaneous

Dr. and Mrs. C. P. Faller, of Harrisburg, have been spending some time in Europe.

Dr. and Mrs. H. F. Hansell, of Philadelphia, have returned to their home after a five-months' European trip.

Dr. Theodore Le Boutillier and family, of Philadelphia, recently returned from a six weeks' trip through Spain.

Dr. LeRoy E. Chapman, of Warren, was operated upon for acute appendicitis, September 24, and has made an uneventful recovery.

Dr. R. F. Otterbein, who was pathologist to the State Hospital, Warren, has associated himself with Dr. G. S. Condit, of Warren.

Dr. H. B. Roop, of Columbia, spent the month of June at the New York Postgraduate Hospital, where he took a course in pediatrics.

Dr. Burton A. Black, for many years on the staff of the Polk State School, Polk, has resigned to engage in practice in Grove City.

A thousand World War nurses attended a banquet at the Penn Athletic Club, Philadelphia, during the American Legion convention week.

A model $250,000 health center, to combat sickness and death in the congested East Side of New York City, will be opened some time this month.

Dr. James H. Burrows, of Williamsport, has gone to New York City, where he is taking a special course in diseases of the eye, ear, nose and throat.

Dr. Ellsmer L. Piper, of Export, is a postgraduate student in the regular course in pediatrics at the Graduate School of Medicine of the University of Pennsylvania.

Dr. David L. Drabkin, for two years a fellow of the National Research Council at Yale University, has been appointed an instructor in biochemistry at the University of Pennsylvania.

DR. WILLIAM H. KINNEY, a staff physician at Jefferson Hospital, Philadelphia, was injured recently when the taxi in which he was riding collided with another car. Both drivers were arrested.

DR. ORLANDO H. PETTY, of Philadelphia, was elected national commander of the Army and Navy Legion of Valor of the United States of America, at the recent annual gathering held in Philadelphia.

THE NEW $750,000 HOSPITAL in Williamsport, made possible by a subscription campaign conducted a year ago, is completed and now in use. The building is seven stories in height and modern in every detail.

DRS. FRANK ALLEMAN AND ROLAND N. KLEMMER, of Lancaster, and Dr. M. H. Yoder, of Lititz, were in Boston during the month of June taking postgraduate work in physical diagnosis and neurology at Harvard University.

IT IS REPORTED that Dr. Samuel H. Iams, of Waynesburg, has been appointed to the staff of the new $600,000 hospital at Princeton, N. J. Dr. Iams has been practicing medicine for more than eighteen years at Waynesburg.

DR. JOHN CASTLELANI, of the Samaritan Hospital, Philadelphia, received a broken nose, October 11, when the ambulance in which he was riding was wrecked by gasoline cans hurled from a truck that collided with the ambulance.

DR. FRANCIS B. HAAS, State Superintendent of Public Instruction, has indorsed the nation-wide campaign for equipment and endowment of Temple University to start in January with the erection of a skyscraper university building.

DR. FRANCIS HARBITZ, director, Institute of Pathology, University of Oslo, Norway, delivered the annual Gross Lecture of the Philadelphia Pathological Society at the College of Physicians, October 11, on "Periarteritis Nodosa."

DR. RAYMOND W. WAGGONER, of the Philadelphia Orthopedic Hospital, has been awarded a fellowship in neuropsychiatry provided jointly by the Commonwealth Fund of New York and the Graduate School of Medicine of the University of Pennsylvania.

BEQUESTS OF $7,500 each to the Children's Hospital of Philadelphia and the Hospital of the University of Pennsylvania, to endow free beds in the institutions, were contained in the will of Dr. Wilmon W. Leach, Philadelphia, who died on September 26.

THE FORTY-THIRD annual meeting of the American Climatological and Clinical Association convened in the Bellevue-Stratford Hotel, Philadelphia, the last week in September, with about 100 physicians and surgeons from various sections of the country present.

DR. H. L. RANDAL, of Philadelphia, was recently convicted as a hit-and-run motorist and fined $200 and costs of prosecution. Dr. Randal was found guilty on September 22 on charges of assault and battery by automobile and failing to render assistance.

MR. DAVID JAMESON, president of the Citizen's National Bank, of New Castle, has given $600,000 for immediate use in the erection of a 150-bed capacity hospital, to replace the present Shenango Valley Hospital. The structure will be known as the "Jameson Memorial Hospital."

AT THE RECENT CONVENTION of the American Legion, held in Philadelphia, a resolution was introduced by the Pennsylvania delegates requesting the Government to build a 1,000-bed hospital in Philadelphia for the care of Pennsylvania ex-service men who now have to go to other states for treatment.

DR. EDWARD L. BAUER, of Philadelphia, has been appointed professor of diseases of children at Jefferson Medical College to succeed Dr. Edwin E. Graham, resigned. For eight years, Dr. Bauer has been in charge of diphtheria prevention work under the auspices of the city department of health.

It was recently announced that a drive to raise $100,000 for the immediate needs of the Northern Liberties Hospital, Seventh and Brown Sts., Philadelphia, has gone over the top. The institution had entirely outgrown its facilities. More than 27,000 patients were treated in the last year, although the hospital has a capacity of only sixty-five patients.

THE NOBEL PRIZE FOR MEDICINE, the most distinguished reward the medical world can bestow, has been awarded Prof. Johannes Fibiger, Danish cancer research authority, of the University of Copenhagen. He has distinguished himself in both tuberculosis and cancer research, and received the Jung cancer research prize in 1924.

DELANO, a railroad town between Hazleton and Mahanoy city, with a population of about 300, is reported to be without a physician. Its only doctor, A. Dengler, left the village to locate at Allentown. Dr. Dengler left Delano, not because the town is going back, but to better himself in a much larger field. It is desired that some physician establish himself there.

IN SEPTEMBER the State Health Department began a scientific survey of the streams of the State, starting with the Juniata River, the ultimate purpose of which is to determine whether purification of the various streams is necessary. The problem of industrial waste and pollution will receive consideration. A traveling laboratory is used by the engineers in their work.

EXAMINATIONS OF CANDIDATES for entrance into the Regular Corps of the U. S. Public Health Service will be held at the following places, December 6, 1926: Washington, D. C.; Chicago, Ill.; New Orleans, La.; and San Francisco, Calif. Requests for information or permission to take this examination should be addressed to the Surgeon-General, U. S. Public Health Service, Washington, D. C.

SPECIAL SCHOOL BUILDINGS will be erected in the northeast and northwest sections of Philadelphia for tuberculous and crippled children as soon as the board of education approves the sites. The committee on elementary schools has recommended the enrollment of handicapped pupils under one roof. The present structures used for tuberculous and crippled children are said to be obsolete.

DR. HENRY I. DORR, a member of the first faculty of the Philadelphia Dental College, was the guest of honor at an informal dinner tendered him by the faculty of Temple University Dental College on the night of October 7. Dr. Dorr, who is eighty-two years and is retired from active service, recently endowed the Temple University Dental School with $50,000 to be used in dental research.

ACCORDING TO STATISTICS made public by the Commerce Department, Washington, D. C., great strides are being made in the fight against tuberculosis. The figures for the United States from 1900 to 1924 indicated lower death rates in 1924 than in 1900 for each age period and for each sex. The decline in fatalities ranged from 73 per cent for females under 1 year of age to 37 per cent for females from 15 to 19 years old.

THE DEVELOPMENT RECORD designed by Dr. Borden Veeder of St. Louis and described in the *Journal of the American Medical Association*, September 4, 1926, which constitutes a practical examination form for preschool children, and is adapted for the use of the physician in his private practice, has been prepared by the American Child Health Association, 370 Seventh Ave., New York City, and may be obtained from them at a nominal cost.

IT WAS REPORTED RECENTLY that more than 200 persons in Fort Lauderdale and neighboring communities in

Florida were suffering from a mysterious illness which appeared suddenly. The ailment, it was believed, was caused by temporary pollution of the water supply there following the recent hurricane disaster. Dr. William R. Redden, medical director of the American Red Cross, accompanied by a corps of physicians and nurses, left for Fort Lauderdale on October 18.

The Philadelphia Housing Association has announced the appointment of Dr. John D. Jungmann as staff member in charge of sanitary inspection. Dr. Jungmann formerly was health commissioner of Columbus, Ga. His duties will consist in having charge of the department which serves as a clearing house for the sanitary and housing complaints reported by over fifty social and health agencies of the city. He will coöperate with various city departments.

Delegates to the first Pan-American Conference of National Directors of Health met in Washington, D. C., September 27 to 29. The sessions were held under the auspices of the Pan-American Union and the Pan-American Sanitary Bureau. The program comprised problems of international importance in the health relations of the American Republics. Surgeon-General Cumming of the United States Public Health Service, said that he considered the gathering "an epochal event in world sanitation."

The American Academy of Ophthalmology and Oto-Laryngology has elected the following officers for the ensuing year: President, Dr. Ross Hall Skillern, Philadelphia; president-elect, Dr. Luther C. Peter, Philadelphia; vice-presidents, Dr. H. W. Woodruff, Joliet, Ill., Dr. Ralph A. Fenton, Portland, Ore., Dr. Conrad Berens, New York, N. Y.; treasurer, Dr. Secord H. Large, Cleveland, Ohio; secretary, Dr. Wm. P. Wherry, Omaha, Neb.; editor of transactions, Dr. Clarence Loeb, Chicago, Ill. Detroit, Michigan, will be the place of meeting for 1927.

The United States Civil Service Commission announces an open competitive examination for a Medical Intern (Psychiatric). Applications will be rated as received until December 30. The examination is to fill vacancies in St. Elizabeth's Hospital, Washington, D. C., at $1,860 a year, and vacancies in positions requiring similar qualifications at this or higher or lower salaries. Full information and application blanks may be obtained from the United States Civil-Service Commission, Washington, D. C., or the secretary of the board of U. S. civil-service examiners at the post office or customhouse in any city.

At the annual meeting of the Pennsylvania Heart Association, held in Philadelphia, October 11, the following officers were elected: President, Dr. John D. McLean, Philadelphia; vice-presidents, Drs. John B. McAlister, Harrisburg, James D. Heard, Pittsburgh, Francis J. Dever, Bethlehem, W. G. Falconer, Clearfield; secretary, Dr. Thos. M. McMillan, Philadelphia; treasurer, Dr. Wm. S. Bertolet, Reading. The Board of Governors is composed of the following: Dr. Joseph Sailer, Philadelphia; Mrs. Wm. Fisher Norris, Philadelphia; Hon. Jesse J. Cunningham, Harrisburg; Rt. Rev. Alex. A. Mann, Pittsburgh; Mr. Clarence Geist, Philadelphia; Dr. Edgar Greene, Easton; and Dr. Martin O'Malley, Scranton.

Dr. Alice Hamilton, of Harvard University, spoke recently at a meeting which the Department of Labor and Industry held at the Sesqui-Centennial. Dr. Hamilton, as Professor of Industrial Medicine, is the only woman connected with the Harvard Medical School. She is the outstanding authority on industrial poisonings, much of her research work having been done for and by the special request of Pennsylvania employers. While Dr. Hamilton's work has touched industrial problems relating to men as well as women workers, she has concentrated upon studying the special industrial hazards which affect women in industry.

The thirty-fourth annual meeting of the Association of Military Surgeons of the United States opened at the Bellevue-Stratford Hotel, October 14. Dr. Wilmer Krusen welcomed the guests; Dr. John B. Deaver introduced the foreign delegates, and Rear Admiral Edward R. Stitt, U. S. Navy, presided. Among the speakers were Dr. George E. de Schweinitz, formerly President of the American Medical Association; Surgeon-General Merritte W. Ireland, U. S. Army; and Dr. Hobart A. Hare, president, Philadelphia College of Physicians.

The new Germantown Hospital, Philadelphia, erected at a cost of $1,600,000, was dedicated October 21. The new structure consists of two six-story buildings. One whole floor has been set aside for the x-ray department. The old building had a capacity of 150 beds; the new over 268 beds. One of the most conspicuous advantages is noticed in the dietetic facilities. The building committee considered the comparative values of a central kitchen with high-speed elevators to carry food to each floor, and the alternative of smaller kitchens throughout the buildings, and decided on the former. It is calculated that trays can be carried from the central kitchen to the farthest patient on the highest floor in less than two minutes.

Over three hundred members attended the annual banquet of the Medical Alumni Association of the Medico-Chirurgical College of Philadelphia on October 14, 1926. Dr. J. D. Matz of Allentown, was toastmaster. Dr. M. P. Dickeson was elected president for the ensuing year. Cash subscriptions of over five hundred dollars with pledges totaling over eight thousand dollars were made at the meeting, looking forward to the establishment of an endowment fund, the interest of which will be available for the sons and daughters of graduates of the Medico-Chirurgical College of Philadelphia, who take up the study of medicine. Assignment of scholarships will be by competitive examination, and the fund will be in charge of a trust company.

On November 1, 1926, a bronze tablet was unveiled at the Philadelphia General Hospital, Philadelphia, as an expression of gratitude to Dr. Edward P. Davis, by the Alumni Association of the Training School for Nurses. Dr. Davis was advisor to the training school from 1886 to his resignation from the staff in 1924. The tablet was presented in behalf of the Alumni Association by Miss Roberta West, and was accepted by Dr. Wilmer Krusen, Director of Public Health of Philadelphia. Addresses were made by Dr. Herman B. Allyn, President of the Executive Board, and Dr. Ward Brinton, who succeeded Dr. Davis, as Chairman of the Committee on Nurses Training School. It was a great source of gratification to Dr. Davis, who was present to witness the ceremonies incident to the presentation and unveiling of the tablet, to know that his services to the training school have been appreciated to the fullest extent by those whom he served so faithfully.

One hundred surgeons and medical experts, representing eleven states, assembled at the Bellevue-Stratford Hotel, Philadelphia, in October, to discuss new methods of treatment in cases resulting from railroad accidents. They are "emergency men," experts in bone surgery on whom the Pennsylvania Railroad calls at short notice in case of accidents or wrecks on the lines. They comprise the Association of Surgeons of the Pennsylvania System. There are 675 of these experts located at strategic points in the railroad's territory. Dr. John B. Walker, of New York, president of the association, presided at the meeting. Among the speakers were Dr. A. P. C. Ashurst, professor of surgery at the University of Pennsylvania; Dr. J. M. Wainwright, chief surgeon, Delaware, Lackawanna and Western Railroad; Dr. Robert H. Ivy, professor of maxillary and facial surgery, University of Pennsylvania; and Dr. D M. Guthrie, chief surgeon of the Lehigh Valley Railroad.

THE PENNSYLVANIA STATE DEPARTMENT OF HEALTH celebrated "health week" in the Pennsylvania Building at the Sesqui-Centennial, October 11-16. Demonstrations were made each day of some activity of the Department. Monday was laboratory day. Tuesday was sanitation day; the engineering bureau demonstrated for the public its preventive activities in connection with water sources along the roadside and in small towns and municipalities. Wednesday was disease-prevention day; an actual demonstration of the usefulness of quarantine and the control of smallpox, scarlet fever, diphtheria, measles, whooping cough, and other communicable diseases was made. Thursday was child-health day, with demonstrations with living models of well-baby clinics. Friday was heliotherapy day, with demonstrations of the effectiveness of direct sunlight in the treatment of tuberculosis. Saturday was bookkeeping day with demonstrations of recording machines used by the bureau of vital statistics in its work, and exhibits indicating the importance of the various tabulations and records that are kept.

AS ONE OF THE BENEFICIARIES of a proposed $20,000,000 expansion movement about to be projected by Temple University, Philadelphia, the Temple School of Medicine will be afforded the opportunity of increasing its scope of usefulness in the practical training of young men and women for the medical profession. Announcement of the decision of the board of trustees of Temple University to launch a comprehensive campaign of physical and academic development has just been made by Dr. Charles E. Beury, president of the institution. The fund, to be raised by popular subscription, will be administered by the Russell H. Conwell Foundation which was formed to perpetuate the educational ideals of the founder. Temple's School of Medicine now shares totally inadequate quarters with the Dental School and School of Pharmacy in an antiquated building far removed from the campus. Under the expansion and endowment plan, however, a building will be designed especially for its accommodation. The Board of Trustees recently announced the purchase of a lot, at Broad and Ontario Streets, opposite the Samaritan Hospital, upon which the new medical school will be erected.

BOOKS RECEIVED

FRESHMAN HYGIENE; Personal and Social Problems of the College Student. By Raymond C. Bull, A.B., M.D., Director of Student Health Service, Lehigh University; and Stanley Thomas, M.S., M.A., Associate Professor of Bacteriology, Lehigh University. 74 illustrations. Philadelphia and London: J. B. Lippincott Company. Price, $2.

INTERNATIONAL CLINICS. By Henry W. Cattell, A.M., M.D., with the collaboration of Chas. H. Mayo, M.D., Rochester, Minn., and other noted physicians. Volume III. Thirty-sixth series, 1926. Philadelphia and London: J. B. Lippincott Co.

OUR DOCTORS. By Maurice Duplay. Translation and preface by Dr. Joseph Collins. New York and London: Harper & Brothers, Publishers, 1926. Price, $2.

LIFE INSURANCE MEDICINE. By Members of the Medical Department of the New England Mutual Life Insurance Company. Volume I. Boston: New England Mutual Life Insurance Co., 87 Milk Street.

THE SURGICAL CLINICS OF NORTH AMERICA. Volume VI, Number III. (Chicago Clinic Number—August, 1926.) 324 pages with 101 illustrations. Per clinic year (February, 1926, to December, 1926). Paper, $12; cloth, $16 net. Philadelphia and London: W. B. Saunders Company.

MODERN CLINICAL SYPHILOLOGY. By John H. Stokes, M.D., Professor of Dermatology and Syphilology in the School of Medicine, University of Pennsylvania. Octavo of 1444 pages with 885 illustrations and text figures and more than 200 detailed case histories. Philadelphia and London: W. B. Saunders Company, 1926. Price, cloth $12 net.

THE OPHTHALMIC YEAR BOOK. Volume XXII. Contains bibliographies, digest, and indexes of the literature of ophthalmology for the year 1925. Edited by William H. Crisp. 9 illustrations in the text. Chicago: Ophthalmic Publishing Company, 1926.

CAVERNOUS SINUS THROMBOPHLEBITIS. A clinical study of bloodstream infection. By Wells P. Eagleton, M.D., Newark, N. J. New York: The Macmillan Company, 1926.

HYGIEIA OR DISEASE AND EVOLUTION. By Burton Peter Thom, M.D. New York: E. P. Dutton & Co., 681 Fifth Avenue.

BOOK REVIEWS

From a reviewer we expect information and advice which will guide us safely and to our profit, warning us of the poor, the mediocre, the commonplace, and inviting our attention to merit.

A BIPOLAR THEORY OF LIVING PROCESSES. By George W. Crile. New York: The Macmillan Company, 1926. Cloth, 405 pages, illustrated.

The author has been conducting researches in the nature of exhaustion and death and the nature of life continuously since 1898. He states that in the progress of these studies there have been four principal stages: (1) studies of the circulation and respiration, (2) studies of the blood chemistry, (3) cytological studies, and (4) biophysical studies.

As a result of these studies, he has developed a theory that the living organism is a bipolar electric mechanism bearing the pattern of the unit cells, that the unit cells are constructed on the pattern of the atom, and that the brain is the positive pole in the organism, while the liver is the negative pole.

Dr. Crile does not claim to have proved his theory fully, but the facts he presents in the 405 pages of this volume are more than suggestive, and not improbably contain the key to many of the mysteries of that force we call life.

FUNDAMENTALS OF DERMATOLOGY. By Alfred Schalek, M.D., Professor of Dermatology and Syphilology, University of Nebraska College of Medicine. Illustrated with 54 engravings. Philadelphia and New York: Lea & Febiger. Price, $3.00.

This compend fulfills all of the requirements of a book of its class. The type is clear and the quality of paper, binding, and illustrations beyond criticism.

As the author states in his preface, the scope of the subject is necessarily limited, which at once relieves the book of criticisms that will promptly occur to the dermatological specialist. Perhaps the outstanding one is as to classification. It is realized that all classifications are vulnerable to attack, and dermatology is no exception within certain limits, but the time has probably arrived when the designation "new growths" should be reserved for neoplasms. Thus, under Class 6 we find carcinoma, lupus erythematosus, sarcoma, syphiloderma, and tuberculosis registered indiscriminately under the heading of new growths. Certainly some separation should be made here—at least between the infectious granulomata of known causation and the tumors proper. This is particularly true when, in the treatment of the individual subject, its position in this classification is indicated. It must indeed be confusing to the student or general practitioner, when reading the section on lupus erythematosus, to see it at once and unqualifiedly classified in the "new growths."

(Continued on page xvi.)

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BOOK REVIEWS

(Continued from page 128.)

The aphorisms are decidedly apropos and valuable; the author might well submerge his natural modesty and emphasize how important these pointers are to the beginner in dermatology. All things considered, this compend is quite justified and a credit to its author.

AN INTERMEDIATE TEXTBOOK OF PHYSIOLOGICAL CHEMISTRY, WITH EXPERIMENTS. By C. J. V. Pettibone, Ph.D., Dept. of Physiological Chemistry, Medical School, University of Minnesota. Third edition, 1925. C. V. Mosby Co., St. Louis, Mo.

Dr. Pettibone, in this latest edition of his textbook, has not only well covered the subject of physiological chemistry, but has introduced the fundamentals of the allied subject of physical chemistry, the important bearing of which is becoming better recognized each day. Study of osmotic pressure, ionization, colloid solutions, and electrical properties of colloids is now explaining many of the factors in bodily chemistry and metabolism which formerly had to be merely accepted as facts.

The book serves both as a text and laboratory guide, as Part II outlines a systematic course of experiments, illustrating the theoretical points previously discussed.

Augmented by explanatory lectures, the textbook will serve a decided need for the presentation of the latest thoughts on physiological chemistry, concisely presented, without digression on controversial points at present unsolved.

LECTURES ON NUTRITION. A series of lectures given at the Mayo Foundation and the Universities of Wisconsin, Minnesota, Nebraska, Iowa, and Washington (St. Louis), 1924-25. Illustrated. Philadelphia and London: W. B. Saunders Company.

These lectures include a large portion of the recent research work in the field of nutrition, and were presented by the persons responsible in a large measure for the several researches. The volume considers the subjects of "The Measurement and Significance of Basal Metabolism," by Francis Gano Benedict; "Problems of Metabolism," by Graham Lusk; "The Proportions in Which Protein, Fat, and Carbohydrate are Metabolized in Disease," by Eugene Floyd DuBois; "Muscular Activity and Carbohydrate Metabolism," by Archibald Vivian Hill; "Our Present Knowledge of the Vitamins," by Elmer Verner McCollum; and "The Relations Between Fertility and Nutrition," by Herbert McLean Evans.

The book is recommended to all those who desire a complete but not too technical survey of the field of nutrition.

GOULD'S MEDICAL DICTIONARY. By George M. Gould, A.M., M.D. Edited by R. J. E. Scott, M.A., B.C.L., M.D. Eighth edition, largely revised, enlarged, and modernized. Flexible binding, 1,398 pages, copiously illustrated. P. Blakiston's Son & Co., 1012 Walnut St., Philadelphia, Pa.

Writers and students in the field of general science and literature find an unabridged dictionary the most valuable book in their studies, for they have learned how to use it. Until Dr. Gould, years ago, produced something parallel in the medical-dictionary field, physicians were at a great disadvantage. And now this splendid edition comes, affording the profession something more than a mere book of definitions, for it carries an astonishing amount of information without which the physician would find it necessary to possess recent books on all of the specialties in order to answer after long searching the multitude of questions arising in an active practice that this handy volume will answer without loss of time.

The volume is admirable in every respect, is skillfully compiled, is accurate, and is an outstanding addition to medical literature.

(Concluded on page xviii.)

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BOOK REVIEWS

(Concluded from page xvi.)

A MANUAL OF NORMAL PHYSICAL SIGNS. By Wyndham B. Blanton, B.A., M.A., M.D., Richmond, Va. Associate in Medicine, Medical College of Virginia. C. V. Mosby Company, St. Louis, Mo. 215 pages. Price $2.50.

This book is well worth while for medical students. It is systematic in arrangement, progressive in discussion of subjects, and should be in the hands of every student as a working basis for his introduction to normal physical signs. The author records some statements in a concise manner which have the happy effect of attracting attention. He holds to his test of "normal physical signs" with which the student should be quite familiar before essaying journeys into pathologic signs and symptoms. We recommend the book to all teachers of physical diagnosis.

GOULD AND PYLE'S POCKET CYCLOPEDIA OF MEDICINE AND SURGERY, based upon the fourth edition of Gould and Pyle's Cyclopedia of Practical Medicine and Surgery. Third edition revised, enlarged, and edited by R. J. E. Scott, M.A., B.C.L., M.D., New York. Philadelphia: P. Blakiston's Son & Co. Price $2.50, with thumb index $3.00.

This remarkable little book presented in its third edition is really worth while. The alphabetical arrangement is, of course, not unusual, but the pleasure of finding a concise answer for the mooted question is real. The completeness of the information obtained is satisfying. The place for this book is on the physician's desk or reading table. On a trip, if tossed into the traveling bag, it will always come to the rescue handily.



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THE PURPURIC DISEASES OF CHILDHOOD*

ISAAC A. ABT, M.D.
CHICAGO, ILLINOIS

Purpura, considered as an essential disease, consists of spontaneous hemorrhages, occurring in the skin or from mucous membranes. Symptomatic purpura occurs in a variety of disorders. On the other hand, it may occur as the most outstanding expression of a hemorrhagic diathesis which is designated as morbus maculosus werlhofii, or purpura hemorrhagica.

HISTORICAL

Joseph H. Pratt,[1] in Osler's *Modern Medicine,* refers to the ancients' conception of purpura. They confused it with the eruption of scarlet fever and measles. Riverius[2] was the first to attempt to separate purpura from the petechial fevers. Zeller,[3] Professor of Medicine in Tübingen, published in 1694 a clear conception of purpura. The older writers confused it with scurvy.

The Hanover Court Physician, Werlhof,[4] in his *Opera Medica,* published in 1735, gave his original clinical observations on the purpuric diseases. The descriptions given were erudite, and the classification was in advance of the prevailing knowledge. He separated purpura hemorrhagica from the general group of purpuric diseases, and in spite of the severe hemorrhages, he considered the prognosis not unfavorable. About 100 years later, Schönlein,[5] in his clinical lectures described a group of purpuric diseases characterized by purpura of the skin, without bleeding from the mucous membranes. The striking characteristic of the Schönlein disorder was the association of pain and swelling of the joints with the purpura. It is interesting to note that it was not until 1881 that Brohn[6] reported two cases of Werlhof's disease in which he observed that the platelets had disappeared from the blood during the active purpuric stage. This observation passed by unnoticed, though many years later it was found that diminished platelets were to play an important rôle in the true conception of the etiology and pathology of hemorrhagic purpura. Denys,[7] the Belgian pathologist, in 1887 also noticed the disappearance of the platelets in purpura hemorrhagica.

Hayem[8] in 1900 noted the absence of the platelets, though he thought an agglutination of these elements occurred which was sufficient to occlude the capillaries. W. W. Duke[9] in several publications during 1910 and 1912 showed that in Werlhof's disease and also in animals injected with diphtheria toxin and benzol, a diminution in the number of platelets was observed. Decrease in the number of platelets was paralleled by the occurrence of purpuric hemorrhages. Purpura occurred when the number of platelets was diminished to 30,000-35,000. Duke also described prolonged bleeding time. E. E. Frank[10] in 1915 studied the reaction between platelets and purpura hemorrhagica in great detail, and he designated the condition as essential thrombopenia. Henoch[11] in 1897 described purpura abdominalis which he considered a form of peliosis rheumatica or Schönlein's disease, and he attempted to separate it from morbus werlhofii. In spite of the great progress which has been made in recent years, there are still many gaps in our knowledge, and further elucidation of the entire subject is to be hoped for.

CLASSIFICATION

As has been previously stated, purpura is a symptom which may occur in a variety of disorders, and in many of them no morphologic or chemical alteration of the blood has been observed. In other conditions, as in morbus werlhofii, a diminution in the number of the platelets has been found.

The earliest classifications were merely clinical or symptomatic divisions, as a natural consequence of the limitation of knowledge. Clinicians are wont to make classifications as a result of their thoughtfulness and wisdom. It is evident that no nosologic arrangement is valid unless it is based on accurate information. Early clinical classifications of purpura were offered by Litten,[12] Lenoble,[13] and Hutinel.[14] In more recent times, stimulated by the advance in knowledge, new attempts have been made to classify this disease group. Glanzmann,[15] under the caption of "anaphylactic purpura," includes a great

*Read before the Section on Pediatrics of the Medical Society of the State of Pennsylvania, Philadelphia Session, October 14, 1926.

many symptomatic forms, and considers them anaphylactic in origin. He thinks that the skin hemorrhages occurring in these cases are the result of certain foreign protein substances gaining access to the blood, causing an agglutination of the platelets. As a result of the anaphylaxis, he thinks that a capillary paralysis occurs, thus permitting the red blood cells to exude from the vessels by rhexis and diapedesis. Under this anaphylactic group he includes the simple purpura, peliosis rheumatica, Henoch's purpura, and the purpuric diseases complicating acute infectious processes. He describes Werlhof's disease in a separate group, and under another heading he would describe the purpuras which occur in leukemia and aleukemia.

Pfaundler and V. Seht[16] consider three groups: first, that which is commonly recognized as Werlhof's disease; second, that which is associated with infectious diseases; and third, those which remain—the Schönlein-Henoch group.

Morawitz'[17] classification differs in that he includes scurvy and hemophilia. Frank's[18] classification is particularly characterized by the fact that he considers the morbus-maculosus group as essential thrombopenia, and another group as hemorrhagic capillary toxicosis. Frank attempts a pathogenetic classification, but he encounters an insurmountable obstacle in that he is unable to explain what the nature of the capillary injury is which he assumes must exist, and which he makes a part and parcel of his hypothesis.

Space will not permit further consideration of plans of classification; but on the other hand, for the purpose of clinical description and study, some simple division should be adopted which will serve as a working hypothesis. Leschke[19] suggests such a division, which will be followed in our clinical description. This is similar to the one proposed by Brill and Rosenthal.[20]

I. Essential thrombopenic purpura (Werlhof's disease)
II. Symptomatic thrombopenic purpura following:
  A. Blood diseases
    1. Leukemia
    2. Agranulocytosis
    3. Pernicious and aplastic anemia
    4. Hemolytic icterus
    5. Gaucher's disease
    6. Splenic-vein thrombosis
    7. Bone-marrow carcinosis
    8. Lymphogranulomatosis
  B. Infections
    1. Sepsis
      a. Endocarditis lenta
      b. Typhoid
    2. Poisons
      a. Benzol
      b. Benzene
      c. Salvarsan
  C. Anaphylaxis
  D. Avitaminosis
III. Nonthrombopenic purpura
  A. Purpura rheumatica (Schönlein)
  B. Purpura abdominalis (Henoch)
Nonthrombopenic purpura as a result of:
  C. Avitaminosis (scurvy), Barlow's disease
  D. Weakness of capillary walls
    (senile purpura, cachectic purpura, purpura of unknown etiology)
  E. Infections
    (bacterial, capillary, embolic, or toxic capillary injuries due to septic diseases)
  F. Poisons
    (benzol, salvarsan, pyridin, and snake venom)
IV. Hemophilia.
V. Fibropenia.

There is a large group of diseases that is characterized by a tendency to bleed, with the production of hemorrhages of varying amounts into the skin and mucous membranes. The morbus maculosus werlhofii type will be considered separately as we proceed. In addition to this important group, we should at least mention hemophilia and infantile scurvy. In the latter we recognize a disease that is dependent upon a deficiency of an accessory food substance designated as vitamin C. Hemophilia is recognized without difficulty because it is an hereditary familial disease. The various forms of purpura have already been classified, though their differentiation frequently leads to difficulty. It is the usual clinical opinion that in simple purpura there are scattered individual hemorrhages into the skin, while in the purpura-hemorrhagica, or morbus-maculosus type, hemorrhages of considerable degree take place into the skin and from the mucous surfaces.

In purpura rheumatica, or Schönlein's disease, the hemorrhages into the skin are associated with febrile joint affections. Henoch's abdominal purpura, in addition to the hemorrhages in the skin, is further characterized by bleeding from the alimentary tract, with diarrhea and most intense colic.

In addition to these forms, there must still be considered among the athrombopenic purpuras those which are due to weakness of the capillary walls, as in cachectic purpuras; those due to infections produced by the collection of bacteria in the capillaries, forming emboli; and those due to infections giving rise to septic diseases leading to toxic injuries of the capillaries. There are also purpuras which result from certain poisons, such as benzol, salvarsan, pyridin, and snake venom.

ETIOLOGY

It has already been stated that this athrombopenic group does not depend upon the reduction in the number of platelets. It is supposed that the hemorrhages occur as the result of some

vascular injury, possibly as the result of a vasomotor disturbance leading to the dilatation of the blood vessels, and finally to rhexis of the vessel walls. It may also be considered that the vessel walls are unable to resist the increase of blood-pressure, so that the blood is literally forced from them into the surrounding tissues.

According to Glanzmann,[21] the purpura depends upon the effect of certain poisons which act by causing anaphylactic reactions. In order that an anaphylaxis may occur, it must be conceived that an infection has taken place, leading to the production of split proteins either from the tissues or from endotoxins of the bacteria. It is supposed that as a result of this anaphylactic process the capillaries lose their normal tone, and irritation and dilatation of the vessel walls occur, leading to skin hemorrhages.

In Henoch's purpura it has been suggested that the colic may occur because of the irritation of the vagus, and consequent contraction of the smooth muscles. Because of the analogy between purpura and serum anaphylaxis and serum diseases, the purpuras of the Schönlein-Henoch type have been thought to be anaphylactoid in character. There is considerable doubt expressed, however, as to whether this process plays any part in the production of purpura. Pfaundler[22] says that infection probably acts as a predisposing factor, though its exact rôle is not established. Frank[23] concludes his study of this group of purpuras by saying that the hemorrhages are the result of poisoning, in one way or another, of the capillary walls. He thinks that the designation of "hemorrhagic capillary toxicosis" will define most clearly the pathogenesis of purpura rheumatica and purpura abdominalis.

What this toxicosis consists of is not definitely known. On the other hand, every clinician has seen cases of purpura, erythema, urticaria, edema, and swelling of the joints during the course of septic infections. According to this view, "hemorrhagic capillary toxicosis" may be viewed as the expression of a mild sepsis.

Referring particularly to the nature of Henoch's purpura, it has been suggested by Dale[24] that the abdominal and alimentary symptoms may be caused by poisonous substances which partake of the nature of histamins. These substances result from the action of certain intestinal bacteria upon albumins, with the production of toxic amino-bases.

It is evident that no definite conclusion can be arrived at even after giving careful consideration to the various theories which have been adduced. The opinion that the purpuras just alluded to are due to some form of sepsis, whether mild or severe, seems to have the greatest justification. Whether this sepsis produces anaphylaxis or toxicosis of the endothelium of the smaller vessels cannot be decided upon by the evidence which has been presented. Neither can it be conclusively accepted as proved that Henoch's purpura is due to the toxic action of amino-bases or histamins.

Symptoms

It will be recalled that Werlhof in 1735 described a type of purpura which appeared to be different from the ordinary symptomatic purpura and which he himself seemed to recognize as a condition that depended upon morphologic changes of the blood. In recent years, we are more and more impressed with the view that morbus maculosus werlhofii is an essential blood disease. It has been shown that this disorder is not only to be differentiated by its external manifestations, but also by demonstrable morphologic changes in the blood. As has already been noted, W. W. Duke[25] has pointed out, as a result of experimental work, that the reduction of the number of platelets in the blood was paralleled by the hemorrhagic diathesis. Another manifestation which had been previously described by Duke is the prolonged bleeding time. This has been determined to be a regular symptom of Werlhof's disease. By very simple technic he ascertained that the normal bleeding time is one to three minutes, while in Werlhof's disease the bleeding is prolonged to about ten minutes. The predisposing causes of hemorrhages are slight mechanical influences, scratching, tooth extraction, blows, or injuries; or being struck may produce hemorrhages or subcutaneous ecchymoses which last for days or weeks.

If a tight bandage be applied to the arm of a patient with essential thrombopenia, a more or less severe hemorrhagic eruption will be produced under the bandage. Frank and A. F. Hess[26] modified this test slightly by placing the bandaged arm in a hot-air apparatus. In morbus maculosus werlhofii, many pin-head to lentil-sized petechiæ developed. Indeed, if the platelets are markedly reduced, suggillation of the entire extremity may occur.

We have already noted that the bleeding time is prolonged. On the other hand, it has been pointed out by all observers that the coagulation time is normal in morbus maculosus. At first glance this seems paradoxical. Duke[27] explains this discrepancy by stating that hemorrhage is not stopped by a clot, but chiefly by intravascular thrombi. The clot is formed from blood at rest and precipitation of fibrinogen is preliminary to the formation of the clot. Thrombus

formation occurs in blood which is flowing. In the process of thrombosis, platelets adhere to any injured portion of the blood-vessel wall, and are deposited in large numbers.

The red and white blood picture is not changed. The quantity of fibrin is normal. As has already been noted, the blood platelets are diminished. Hayem[28] has pointed out that those platelets which are present are strikingly large. They are more elongated than round. These giant platelets may reach the size of lymphocytes, and indeed may be mistaken for them.

The coagulated blood, in Werlhof's disease, does not retract from the walls of the glass vessel in which it is contained. The coagulum does not yield serum. This inability of the coagulum to retract is due to the lack of platelets in the fibrin net.

Frank,[29] having studied a group of cases, designated morbus werlhofii as essential thrombopenia, a disease in which the temporary or permanent diminution of the platelets resulted in a reduction below the critical number, 35,000. Frank further characterized essential thrombopenia as one in which no other pathologic changes in blood or organs could be found beside those which were just referred to; namely, a reduction in the number of platelets, increased bleeding time, and diminished retractility of the clot.

The history in most instances is characteristic. Familial influence is absent, which view is confirmed by recent observations of Glanzmann.[30] Patients usually relate that they have suffered from some form of bleeding since childhood. Epistaxis and bleeding from tooth extraction or accidental wounds are referred to. Morbus maculosus werlhofii occurs during school age. It is rare in infants and young children.

Mild contusions may lead to diffuse bleeding under the skin. Gastric or intestinal hemorrhages may occur. Severe bleeding may take place from the urinary tract, uterus, and nose. The hemorrhages may occur spontaneously or as the result of insignificant trauma, pressure, or slight blows. The Rumpel-Leede phenomenon, which consists of petechial hemorrhages when constriction is applied, is usually markedly positive.

Fever is either absent or slight. The general condition of the patient is not much disturbed unless severe bleeding occurs. Glandular swelling is not seen. The spleen may be slightly enlarged, although in many cases this is not observed.

There are variations in the course of the disease. Sometimes improvement takes place for a time, to be followed by recurrence of the bleeding. At other times, there may be a longer interval between attacks. Recurrences may take place after months or years of freedom from symptoms. As has already been said, the blood picture is normal, although severe anemia may result after extensive loss of blood. Finkelstein[31] suggests the seasonal occurrence of Werlhof's disease, and he points out that nearly all of the first and later attacks occur during the winter, from October to February.

If the thrombopenia persists, the tendency to bleed becomes a permanent condition, and may last for years or for the lifetime of the patient. Under these circumstances, the condition may be designated as a hemorrhagic diathesis.

Pathogenesis of Werlhof's Disease

Prolonged bleeding time and nonretractility may occur as the result of the thrombopenia. The significance of the platelets in the stopping of the hemorrhage has not been accepted by all investigators, though by the majority. It may be doubted whether the spontaneous hemorrhages result from decreased platelets. The hypothesis of Frank[32] states that the blood exudes through the thinned vessel wall, due to minute defects in its continuity, possibly vasomotor in origin. He assumes that in this process the thrombocytes play a part. This explanation is not universally satisfactory. Morawitz,[33] Kaznelson,[34] Schultz,[35] Katsch,[36] Klinger,[37] and others, consider that the thrombopenia occurs as the result of thrombocyte degeneration leading to lesions of the blood vessels.

For the thrombopenia, Frank[38] considers the bone marrow responsible. The giant cells of the bone marrow, out of whose cytoplasm the platelets arise, are damaged by toxic substances which are formed in the pulp of the spleen and from the sinus and reticulo-endothelial lymph glands, the bone marrow, and Kupffer star cells of the liver. The same poisons may damage the developmental granular elements and embyronal cells of the erythrocytes, causing aplastic anemia.

Opposed to this theory, Kaznelson[39] takes the view that the increased thrombocytolysis in the hyperplastic and hyperfunctioning reticulo-endothelial system is the essential feature in the etiology of thrombopenia. Other possibilities arise to disturb the rather unstable platelets.

Differential Diagnosis

In differentiating purpura hemorrhagica from other conditions, hemophilia, aplastic anemia, leukemia, and scurvy deserve special consideration. In true purpura hemorrhagica, the platelets are definitely diminished in number, the coagulation time is normal, and the bleeding time is prolonged. The retractility of the clot is di-

minished or absent, and minute hemorrhages appear on the extremities if they are constricted.

In contrast, in hemophilia the platelet count is normal, the coagulation time is increased, bleeding time is normal or prolonged, and the clot retracts normally. In addition, there is a family history of the condition.

Aplastic anemia is difficult to differentiate. Frank,[40] a very close student of the hemorrhagic diatheses, maintains that the two processes are almost identical. As a matter of fact, aplastic anemia results from damage to the bone marrow. So far as our present knowledge permits us to say, aplastic anemia may be a primary disease or may occur as the result of other pathologic processes. Possibly in some instances it is secondary to septic processes or to poisons such as benzol, x-ray, radium, and thorium. The most important clinical manifestations of aplastic anemia are pallor, marked diminution of hemoglobin and erythrocytes, and hemorrhages into the skin. In the majority of cases there is extreme reduction of the leukocytes. Sometimes there are a thousand white cells, and sometimes they fall as low as 100 per cubic millimeter. The lymphocytes predominate. The blood platelets are markedly diminished, or in many cases entirely absent.

This entire failure of blood regeneration does not occur in purpura hemorrhagica. The striking similarity of the two diseases consists in the occurrence of purpura in both conditions, with a marked reduction of platelets in each.

The morphology of the blood, as studied on the slide in the aleukemic phase of leukemia, is similar to that seen in aplastic anemia, and the differentiation of this disease from morbus maculosus werlhofii, is similarly made on the total reduction of all the cellular elements of the blood, as occurs in aplastic anemia.

In infantile scurvy, purpura may occur; though the history, classical symptoms of stomatitis, bleeding gums, intramuscular and subperiosteal hemorrhages, pain and edema of the extremities, and in doubtful cases, x-ray pictures of the long bones showing the white line of Frankel, will clear up the diagnosis.

The Prognosis of Morbus Maculosus

In mild cases the outcome of the affection is favorable. Only a few purpuric spots occur, and the patient is only moderately ill. But there are all grades of the disease, from the mildest to the most malignant forms. In some severe cases, death may occur from hemorrhage in a few days. In those patients who suffer from persistent thrombopenia, death may occur from tooth extraction, menstruation, circumcision, or other minor operations. Though it is said that major operations may be performed on these patients, careful attention must be paid to hemostasis. Possibly some of the unexplained hemorrhages following tonsillectomy may be assigned to a persistent thrombopenia.

Concerning the duration of the disease, it is difficult to give a definite answer for an individual patient. The mild cases may reoccur at longer or shorter intervals without any serious results. Some of the more severe ones may terminate in cerebral hemorrhage or bleeding into some other tissue or organ. Frank[41] thinks that the chronic forms gradually pass into aplastic anemia. This view is not universally accepted. The bone marrow may become overtaxed and eventually insufficient, and aplastic anemia may result. Otherwise the identity of morbus maculosus and aplastic anemia is not proved.

Treatment

In view of our meager knowledge concerning the various causes of hemorrhagic diatheses, it is difficult to postulate a therapeutic program which will be effectual in all cases. It would be desirable to institute some form of treatment which would diminish the bleeding time. Even if one succeeded in increasing the coagulability of the blood, the bleeding would tend to continue, because we have already learned that in purpura hemorrhagica there is no decrease in the tendency of the blood to coagulate. Also, the tendency for blood to clot cannot be increased *in vivo*. Calcium-lactate therapy, as well as the injection of gelatin, has been utterly disappointing. The results obtained by the injection of blood serum are more likely to be harmful than beneficial. Attempts have been made to treat the condition by the injection of thrombokinase in order to increase the coagulability of the blood. In these experiments it was observed that after the injection, the coagulation time was decreased at first, but in a very short time, perhaps in a few seconds, the clotting was uninfluenced or even prolonged.

Blood transfusion has been used in the treatment of purpura hemorrhagica for a long time. Recent authors have advised the use of the whole blood, with the entire platelet content in the hope of increasing the coagulability by direct transfusion of the platelets. Technically this can be done by direct transfusion from an accessible blood vessel of the donor or by the use of citrated blood. Schrampf,[42] Ottenberg, and Libman[43] used twelve direct transfusions in nine cases of purpura hemorrhagica. Two died, six recovered, and one patient left the hospital unim-

proved. The prompt cessation of the hemorrhage was striking in most of these cases.

Unger[44] thinks that the results are only fairly good. Frequently in purpura several transfusions are necessary to control a single attack of bleeding.

W. W. Duke[45] states that none of the patients showed the same tendency to bleeding after transfusion as before, even after the platelet count had fallen to its former level. This was shown in the bleeding time, as well as by the spontaneous hemorrhages.

Transfusions may be necessary in preparing the patients for splenectomy. This latter procedure was first suggested by Kaznelson[46] of Prague in 1916. Splenectomy marks the greatest advancement in the treatment of this disorder. The literature of recent years contains many reports which seem to indicate that this treatment has a definite and positive value. Up to the present writing, more than sixty cases have been operated on with uniformly good results. Frank[47] carried out this procedure six times, and in five patients complete cure was said to have occurred.

On account of the comparatively recent introduction of the operation, further time should be allowed to study the ultimate result before any dogmatic conclusion is drawn.

After splenectomy, the platelets rise suddenly to normal or above normal. Gradually they reach the physiologic value, which may be stated to be 100,000 to 200,000 per cubic millimeter. Frank[48] says that in some cases the benefit of splenectomy is only temporary. In another rarely occurring group of cases the benefit is slight.

Operation in a first attack of the disease is contraindicated on account of the uncertainty of the diagnosis at this stage and because of the unfavorable results which have been recorded from early operations. The best results are obtained in those cases in which chronic thrombopenia exists. In the acute fulminating cases of purpura hemorrhagica, the result of extirpation of the spleen has been uniformly unfavorable. In many of the patients, there is a tendency during the postoperative stage for the blood to return to the condition of thrombocytopenia with its nonretractile clot.

Stephan,[49] Leschke and Wittower,[50] and Fitz-Hugh[51] in collaboration with Pancoast and Pendergrass, have irradiated the spleen with varying results. The last investigators express themselves as being encouraged with the results, although they feel that the method should be more generally tried before any definite conclusions can be drawn.

Frank[52] gives the following indications for splenectomy: (1) in a child, if frequent hemorrhages lead to chronic anemia and retarded development; (2) in an adult, if hemorrhages are repeated; (3) frequent hemorrhages leading to grave anemia.

A study of the literature and the accumulated knowledge on the subject of purpura shows that a certain number of cases of petechial hemorrhage are due to grave blood disorders, infections, and local toxic effects on the blood vessels unassociated with morphologic changes in the blood elements. This does not apply to those cases of secondary anemia due to repeated hemorrhages. In this group there is no reduction in the number of platelets. In morbus maculosus werlhofii we recognize a primary blood disease which is characterized by a more or less permanent reduction in the number of these platelets.

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Through the carelessness and poor business methods of doctors in the past, it becomes necessary to educate the public regarding the payment of doctors' bills.

Symposium on Thoracic Surgery *

X-RAY DIAGNOSIS OF EMPYEMA

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It is not possible to make a diagnosis of empyema by x-ray methods alone. Roentgenologically, one can demonstrate fluid in the pleural cavities, but cannot distinguish purulent, serous, sanguineous, or serofibrinous pleuritic effusions.

Since pathologic changes in the thorax are recognized roentgenologically as deviations from the normal image, it becomes necessary at the outset to familiarize one's self with the shadows cast by a normal chest upon the fluoroscopic screen or sensitive film.

If films are placed at a distance of two meters from the target, the resultant roentgenograms will show the exact size of the structures contained within the thorax. This method, also, has the added advantage of showing the entire lung area.

Fluoroscopic examinations and roentgenograms are made in the anteroposterior, postero-anterior, lateral, and oblique directions. The anteroposterior, made with the patient facing the film, the tube being behind and centered to the spine, on a level with the spine of the scapula, is the one



FIG. 1.—Normal chest.

most commonly used, although to show interlobar pleuritic fibrosis, the tube should be raised to the height of the head or lowered to the level of the pelvis. The normal pleura does not show roentgenologically.

In this position the heart is nearest the film, and therefore its shadow is less distorted, and the resultant roentgenogram of a normal thorax will disclose the following landmarks (see figure 1):

The whole thorax is semi-egg-shaped, is symmetrical in outline, and is divided into two irregular parts by a central shadow. This shadow represents the mediastinal structures and is pro-



FIG. 2.—Beginning effusion. Note obliteration of the costophrenic sinus, cardiophrenic sinus, and diaphragm. Also fluid line, higher along axillary border.

duced by the heart, aorta, superior vena cava, esophagus, trachea, sternum, and spine. The lung structures are shown as two clear spaces on each side of this mediastinal shadow, crossed from above downwards and outwards by the shadow of the ribs. The shadows cast by the ribs anteriorly and posteriorly meet at the extreme outer limit of the roentgenogram and represent the axillary borders. The shadows of the clavicles crossing near the top of the roentgenogram sharply demarcate the apices of the lungs.

The base of the thorax is formed by the right and left diaphragm. Its outline is curved, the left side being slightly lower than the right, and when seen on the fluoroscopic screen, it rises and falls with each expiration and inspiration.

The mediastinal shadow, which projects into the left lung field, is produced principally by the aorta and heart. It has two curves or arches on the right side. The upper one corresponds to the superior vena cava, and the lower bulging portion to the right auricle. On the left there are three curves or arches; the upper one corresponding to the arch of the aorta, the middle one

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to the pulmonary artery (conus pulmonalis), and the lower one to the left ventricle.

When the heart is viewed fluoroscopically, individual pulsations can be seen corresponding to the aorta, auricles, and ventricles.

In addition to this mediastinal shadow, we see on each side a shadow less dense, larger on the right than on the left, where it is partially obscured by the heart shadow, crescent-shaped, variable in size, and slightly separated from the heart shadow, particularly on the right. These shadows are known as the right and left hilum, and are probably produced by the pulmonary vessels, although pathologic changes in the bronchi or mediastinal adenopathy may increase their density and size.

There are four other important landmarks to be considered; namely, the angle formed by the heart and diaphragm, and the angle formed by the diaphragm and ribs. The former are known



FIG. 3.—Total effusion. Note displacement of mediastinal structures to opposite side.

as the left and right cardiophrenic angle, and the latter, as the left and right costophrenic angle. The costophrenic angle being the most dependent portion of the pleural cavity, pleuritic effusions are seen here first.

The movements of the heart, lungs, diaphragm, and ribs are quite important, pathologic changes in the chest necessarily producing changes in its movements.

Barjon has shown that one of the first signs of fluid in the chest is the fixation of the diaphragm, this fixation being seen even before the pleuritic effusion appears. This phenomenon, however, is rarely seen, since the patient is not examined fluoroscopically until the effusion is fully established. This fixation of the diaphragm continues for some time after the fluid is withdrawn.

Barjon claims that "In certain cases of hydrothorax, in patients with Bright's disease, the movements of the diaphragm were frequently retained in spite of the existence of an abundant effusion. This perhaps may have an interesting significance which might permit a distinction to be made between a purely mechanical effusion



FIG. 4.—Apical encapsuled effusion. Note partial effusion of large cavity. Also characteristic line at upper level of fluid.



FIG. 5.—Note water level line, air having been admitted by paracentesis.



Fig. 6.—Diaphragmatic encapsuled effusion.

(and it is well known how rare they are) and those which are accompanied by definite pleural inflammation. By combining clinical, radiologic, and cytologic study of effusions, a solution of this interesting question would undoubtedly be reached."



Fig. 7.—Encapsuled effusion. Note displacement of mediastinal structures.

He further adds, "It might be asked whether in pleurisy at the outset there really exists a true paralysis of the diaphragm, and whether it is not rather an involuntary immobilization brought about by the patient due to the painful stitch in the side which the respiratory movements exaggerate."

Whatever the cause, the diaphragm, nevertheless, remains stationary in true pleuritic effusions. It follows, therefore, that when fluid begins to collect in one of the larger pleural cavities, if seen early, we notice the following changes in the order named (see figure 2): fixation of the diaphragm, obliteration of the costophrenic angle, obliteration of the cardiophrenic angle, disappearance of the diaphragm, and disappearance of the usual lung shadow. This latter may progress until the entire lung is



Fig. 8.—After partial evacuation of the fluid from an encapsuled collection. Note water line and return of mediastinal structures to normal.

obscured. Usually, however, a tiny aërated portion is seen at the apex even in extreme cases.

Coincident with a collection of fluid within a larger pleural cavity, compression of the lung and disappearance of its usual shadow occurs. The intercostal spaces are widened, and the heart, aorta, and trachea are pushed toward the unaffected side.

When the effusion is total, all the clear lung area becomes obliterated; all clinical signs are lost except flatness, absence of fremitus, and an increased area of dullness of the opposite side, due to displacement of the heart and mediastinal structures. Here the fluoroscope reveals only the obliteration of the lung and displacement of the mediastinum to the opposite side (see figure 3). A cyst or tumor, even if large enough to displace the mediastinal structure, never completely obliterates the clear lung field. A small clear zone at the base always remains, limited by an



FIG. 9.—Cyst of lung, diaphragm not obliterated. Note that line at upper limit of the obscured area has not the characteristic curve of fluid.

upper curved border, which usually takes a direction opposite to that of pleuritic effusion.

When the effusion is not total, its shadow is more dense below, gradually fading out so that the upper limit is rather ill-defined, the upper border of the fluid always assuming a characteristic shape. It is not level but curves upward from the mediastinal shadow, its highest point being along the axillary border (see figure 4).

This curve is said to be produced by the following physical combinations: First, a potential cavity containing no air partially bounded by a flexible air-containing organ (the lung), the lung being free to move along its outer limits, but fixed at the hilum by the stem bronchus and the large vessels. That this is so can easily be demonstrated by introducing air into the pleural cavity by paracentesis or otherwise, when the characteristic curved line disappears and is replaced by the so-called water-line—a straight line representing the upper limit of the fluid (see figure 5). A comparison of the roentgenograms



FIG. 10.—Lung cyst. Note air below. Upper line an irregular curve. Dome not at highest point, but along mediastinal border.

made before and after a single aspiration of fluid from a larger pleural cavity or from an encapsuled collection will show very little, if any, change in the fluid level or its outline unless most of the fluid is withdrawn. This is accounted for by the fact that in partial aspiration the lung is still somewhat compressed—the ribs still press upon the fluid even though the intercostal spaces are decreased. Lastly, the heart and diaphragm do not completely assume their normal position, but still make some compression upon the remaining fluid.

Encapsuled effusions are hard to diagnose by clinical methods; hence, the radiologic examination in these cases will greatly aid the clinician. While the effusions may be serous and will therefore be removed by absorption, they are nearly always purulent, and surgical intervention becomes necessary for their removal. In these cases, the radiologic examination will not only establish the diagnosis, but an accurate localization of the lesion will aid the surgeon in determining the point of paracentesis (see figure 4).

The location of these pockets is variable. They receive their names from their position; as, interlobar, diaphragmatic, mediastinal, apical, etc. The apical variety is rare, only a few cases having been reported. These were all serous in character, and were removed by spontaneous absorption.

The shape which these lesions assume is due to the characteristics of their surrounding media. They always have a partially fixed base; i. e., axillary border of the ribs, mediastinal structures, or diaphragm. The remaining part of the surrounding media is composed of a flexible pneumatic structure into which the walls of the encapsuled fluid bulge as their contents increase in quantity. (See figures 6, 7 and 8.) One side of the encapsuled fluid, therefore, usually has a *regular* curved border. When this fluid is collecting between the lobes (interlobar effusion) and extends from the axillary border to the hilum, two bulging borders may be seen.

The entire encapsuled fluid casts a homogeneous shadow, while in a cyst of the lung similarly situated, the shadow is not homogeneous but has a small area, usually along its upper border, through which the light passes more or less readily, thereby destroying its homogeneity.

The smooth bulging outline of the encapsuled fluid differentiates it from a lung abscess or other pathologic lesions surrounded by a more or less inflammatory zone, having a ragged, irregular outline. Whenever a collection of fluid within the pleural cavity has an *irregular* curved smooth border, one should suspect a cyst or tumor, since the formation of an interlobar collec-

tion of fluid encroaching upon lung tissue usually produces a smooth curved border, *regular* in outline. (See figures 9, 10, and 11.)

The upper curve produced by the fluid of a lung cyst is the reverse of that formed by fluid in a larger pleural cavity. In other words, instead of the highest point of the upper border of the fluid being along the axillary border, it is along the mediastinal border.

In a tumor or cyst, as already mentioned, even if large enough to displace the mediastinal structures, the clear lung field is never completely obliterated, a small zone always remaining.

To localize accurately an encapsuled collection of fluid within the thorax, lateral views should be made. By this method, one can detect the outline of the upper limit of the fluid, and can inform the surgeon whether the collection lies nearer the anterior or posterior border of the chest, thereby facilitating surgical intervention.

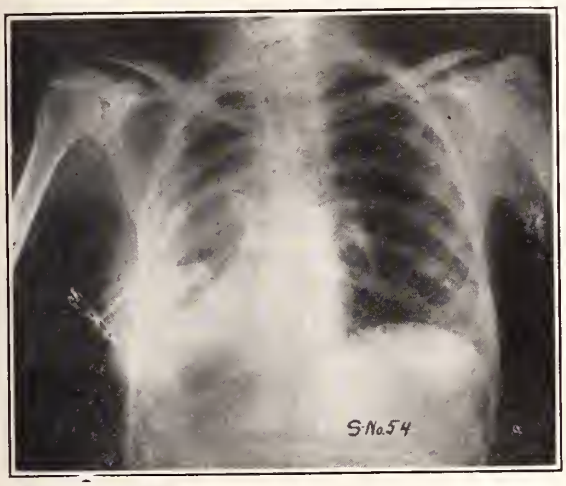


Fig. 11.—Showing cyst after partial aspiration of its contents. The sac can still be seen. Note dense area along mediastinal border.

These collections at times may be very large, nearly obliterating one entire lung and displacing the mediastinal structures to the unaffected side, while at other times they are so small as to escape detection except by roentgenologic methods. This is particularly true of those collections situated along the mediastinal border where they are overlapped by the heart and may not be detected by percussion.

A diaphragmatic effusion also may be mistaken clinically for a liver abscess (so-called subphrenic abscess) unless examined roentgenologically. If examined early, the fluoroscope will reveal a fixation of the diaphragm in both cases, a small collection of fluid in the larger cavity often accompanying liver abscess and obliterating the costophrenic sinus, but not completely obliterating the upward bulging diaphragm, while in a diaphragmatic pleural effusion the diaphragm is completely obliterated and the characteristic dome-shaped shadow may be seen bulging into the lung area.

Not all large interlobar collections displace the mediastinal structures to the opposite side. In long-standing cases or in some cases following pneumonia where adhesions have been formed between the pericardium and the pleura forming the encapsulation, the heart may be pulled toward the affected side.

All the signs which have been mentioned may be demonstrated by a clinician, when aided by the roentgenologist.

While an effort has been made to show the value of roentgenologic examination in arriving at a diagnosis in these cases, the fact should also be emphasized that a diagnosis should never be made at once from this method alone. The roentgenologic findings must always be combined with all other clinical data obtainable. The clinician and roentgenologist working in conjunction and correlating their findings is "a consummation devoutly to be wish't."

THE BRONCHOSCOPE AS AN AID IN THE DIAGNOSIS AND TREATMENT OF PULMONARY INFECTIONS

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Bronchoscopy has developed to the point where it may be said that:

(a) The interior of the lung may be inspected safely.

(b) The orifice of the bronchus leading to any one of the five lobes can be quickly identified, and any abnormality in the lumen, mucosa, or secretions thereof determined.

(c) Any departure from normal in the secretions, the mucosa, the lumen, or in the form and movements of the bronchial walls, is noted with all the certainty of direct vision.

(d) Obstructing masses of secretion can be removed and the subjacent bronchi, fistulæ, or cavities explored.

(e) Specimens of tissue and uncontaminated specimens of secretions can be removed with precision.

(f) The data as to lesions or their absence can be obtained, not merely with the general reference to right or left lung, but with the utmost precision of localization as to lobes and, except in infants, to portions of lobes.

(g) Pneumonograms can be made of any particular region, furnishing accurate, localized, and graphic data of the utmost diagnostic value. Bronchoscopic inspection reveals the pathologic area into which bismuth subcarbonate or lipiodol

are to be introduced. If obstruction exists, it is dealt with bronchoscopically, so that the distal region can be reached with the opaque material.

(h) In considering the value of the bronchoscope in diagnosis, it must be remembered that it is not only the direct information that is helpful. It is true that when a bronchoscopic diagnosis of cancer of the lung has been confirmed by the histology of the bronchoscopically removed specimen, the diagnosis is absolute and final; but there are other cases in which diagnostic aid of the utmost importance is furnished the internist in the interpretation of the physical signs he has elicited. For instance, it has often happened that these signs have very positively shown bronchial obstruction to exist in the bronchus leading to a certain lobe, or portion of a lobe, without affording any definite information as to the nature of the obstruction, whether foreign body, neoplasm, or inflammatory sequelæ. It is only by the bronchoscope that such supplementary information can be obtained with all the certainty afforded by direct inspection of the interior of the bronchus concerned.

(i) All the diagnostic information indicated above may be obtained in any patient whose mouth can be opened; and

(j) It can be obtained without any anesthesia, general or local, though local anesthesia may be used in adults if desired.

The foregoing is simply a categoric enumeration of what is being done daily with the bronchoscope. It does not require a great degree of vision to foresee the day when it will become a question with the physician or surgeon whether, in any case of chronic suppurative disease of the lung, he has exhausted all diagnostic means if he has not obtained the information obtainable only with the bronchoscope, to supplement the diagnostic data afforded by the physical signs, the roentgen-ray examination, and the clinical laboratory.

Diagnostic Bronchoscopy

PULMONARY ABSCESS, BRONCHIECTATIC ABSCESS, AND DROWNED LUNG.—The bronchoscope, affording as it does the means of local direct inspection of the diseased area, is, next to the roentgen ray, one of the most important means of differentiating between these various lesions, one or all of which may be present. Referring to the differential diagnosis of pulmonary suppurative conditions, Francis T. Stewart said: "Unless he feels that he knows so much about the lesion in the particular patient's lung that he has nothing more to learn, the surgeon should be glad of all the information a diagnostic bronchoscopy may afford."

BRONCHIECTASIS is a disease in which it is exceedingly difficult to obtain satisfactory results from either medical or surgical treatment. In view of this, it would seem that the surgeon as well as the internist may well avail himself of every diagnostic means that may yield information as to the character, location, and extent of the lesion. Bronchoscopy certainly has a place as one of these means. Furthermore, as stated by Lord, "In cases with localized bronchiectasis, the possibility of a foreign body, benign or malignant tumor, or cicatricial bronchostenosis as a cause make bronchoscopic examination desirable." Abundant clinical confirmation of this clear statement has come to our Philadelphia clinics.

TUBERCULOSIS.—Accumulating clinical evidence points strongly to the probability that in the not distant future most cases of pulmonary tuberculosis with persistently negative sputum and negative roentgen-ray findings will be classed as calling urgently for diagnostic bronchoscopy. By this it is not meant that bronchoscopy is an important means of diagnosing tuberculosis; but rather that only in this way will the surgeon ever have the necessary early opportunity to cure cancer of the lung by lobectomy. No case of cancer of the lung has come to the Bronchoscopic Clinic that has not at some time in its early stages been classed and treated as pulmonary tuberculosis.

INDICATIONS AND CONTRAINDICATIONS TO DIAGNOSTIC BRONCHOSCOPY.—While it cannot be said that any procedure involving direct examination of diseased viscera can be forever totally free from mortality; yet we do not know of a single death due to the insertion of a bronchoscope. It is conceivable that were a bronchoscopy done upon a patient on the eve of a fatal hemorrhage, the coincidence might reflect upon the bronchoscopy as a factor in precipitating the hemorrhage, but as yet no such sequence has occurred. In cases of hemoptysis with sputum negative for tubercle bacilli, diagnostic bronchoscopy is strongly indicated. In some hemorrhagic cases it may be wise to postpone diagnostic or therapeutic bronchoscopy for a time; but, on the other hand, bronchoscopic hemostasis has been of life-saving efficiency. It does not seem wise to try to lay down any rules for guidance in the matter because they may be misleading. The decision in each particular case should be made by the surgeon, the internist (or pediatrician), the roentgenologist, and the bronchoscopist in conference; and too much weight should not be attached to the opinion of the bronchoscopist in such a conference. In case of difference of opinion, the deciding vote should be cast by the internist (or pediatrician) whose

viewpoint in such cases is usually broader than that of the specialist.

When the feasibility of bronchoscopy was first discovered, bronchoscopic removal of foreign bodies was attempted by untaught men, and in many instances the patients were babies. The inexperienced operator, the complicated mechanical problem, and the tender little patient all combined to prevent success and court disaster. It is now well established that when the surgeon has need of such information regarding endopulmonary pathology as only bronchoscopic inspection can give, he need have no hesitation in calling upon his bronchoscopic assistant for a diagnostic bronchoscopy. This statement of the safety of bronchoscopy is not merely the conclusion of the bronchoscopist "who may metaphorically as well as actually see things narrowly through a small tube," but it expresses the opinion of the many internists and surgeons who have seen enough of bronchoscopy to be able to judge. It should be repeated, however, that while bronchoscopy is a safe procedure, the surgeon, internist, or pediatrician, cannot "tell the intern to 'put in a bronchoscope' with the same lack of hesitation with which he would say 'put in a needle.' It requires more training to do a bronchoscopy than to do a 'needling.'" Any graduate in medicine may be trained in a few months to do a safe diagnostic bronchoscopy; but training is essential not only to success but to safety.

Bronchoscopic Treatment

Bronchoscopic aspiration.—When it comes to a decision, in a particular case, as to whether or not bronchoscopic aspiration, medical treatment, roentgen-ray therapy, surgical operation and after care, or a combination of two or more of these methods is indicated, we are confronted with the fact that no enthusiastic hobbyist can have the breadth of vision or the foundation of experience to reach a decision just and fair to the best interest of the patient, which is, of course, the fundamental requirement.

On the other hand, few internists and fewer surgeons have had opportunities of observing the effects of bronchoscopic aspiration, expertly done, on a sufficiently large number of patients, to say in every instance whether or not this form of treatment is indicated.

In our clinics, the decision as to whether or not a bronchoscopy shall be done, either for diagnosis or peroral drainage, rests with the internist, the surgeon, and the roentgenologist. If there is any doubt, the bronchoscopy is postponed until the indications are clear.

In general, it may be stated that peroral bronchoscopic aspiration should be regularly carried out as an adjunct to the medical treatment in most if not all cases of pulmonary suppuration in which surgical operation is postponed. The decision as to advisability of postponing surgical procedures, however, should rest entirely with the surgeon. He is best qualified to select the best time for his operation, and it is unjust to the patient for any one to postpone operative measures beyond that time.

Post-tonsillectomic lung suppuration.—There is one type of case in which the indications for bronchoscopic aspiration are very clear to every one who has seen this method used in this type of case and who has not confused it with other types. The marvellous results obtained stand out so conspicuously that it is difficult to restrain enthusiasm. This type of case was first pointed out and clearly defined by Willy Meyer a number of years ago. Abundant experience has now absolutely confirmed Meyer's original statement, which is as follows: "There is no doubt in my mind that not surgery in any form, inclusive of the artificial collapse of the lung, is primarily indicated in these terrible cases, which still occur so frequently, but bronchoscope, with thorough aspiration, without or with local antiseptic treatment." This statement referred particularly to the acute stage at the first onset of symptoms.

Every one who has done bronchoscopic aspiration or has observed its results, when done at this stage, in this type of case, has marveled at the promptness with which the symptoms begin to subside in most instances. If the aspiration is done at the right time, members of the personnel at our clinic predict the fall of the temperature within a certain time, and we are rarely disappointed.

Residual suppuration.—Every surgeon is familiar with cases in which the patient, though greatly benefited by the external drainage established by surgical means, has not been completely relieved. There is a slight discharge externally that does not cease, there is more or less expectoration of pus and symptoms of slight absorption. In some of these cases, when the indications are not clear for reopening the chest, the surgeon's bronchoscopic assistant may be of service in curing the patient by improving the upward drainage not only by bronchoscopic aspiration but by restoring a full-sized bronchial lumen. The latter will in some cases be accomplished by bronchoscopic dilatation of strictured passages, but more often by the removal of granulomata and exuberant granulations.

Empyema.—The natural tendency of suppurative pulmonary disease is to invade the

pleura. Where a suppurative focus has ruptured into the pleural cavity, as it so frequently does, external surgical procedure is, of course, indicated. The pleural cavity cannot be efficiently drained by peroral bronchoscopy. In other cases, however, in which a suppurative process has been spreading toward the pleural cavity but has not yet ruptured into it, the pleuraward progress may be arrested by peroral bronchoscopic drainage. The use of the bronchoscope in such cases advised by Manges has met with very striking success in a number of patients referred to the Bronchoscopic Clinic by the surgical department. In most of these cases the rapidly spreading diffuse process has been arrested, and the resulting localization of the focus has been followed by complete cure as the result of bronchoscopic drainage.

BRONCHIAL STENOSIS.—Chronic stenosis of a bronchus, if of marked degree, means always chronic infective disease, not because any new infective agent is introduced, but because the infective agents that are at all times, in all of us, obtaining access to the lung have a more favorable environment in which to develop. The efficiency of the bronchoscope in the dilatation of bronchial stenoses has been abundantly proved.

It follows that bronchoscopic treatment is indicated in cases of bronchial stenosis. Even if external drainage has been established, it will probably never cease if there is an area of lung shut off from normal bronchial upward drainage. It seems that this is an important field for the bronchoscopist to be of aid to the surgeon.

BENIGN GROWTHS OF THE LUNG are not strictly to be classed as chronic infective diseases, yet, as shown by Willy Meyer, they cause chronic suppuration. Endobronchial growths are readily removed with the bronchoscope, and removal is usually followed by complete disappearance of the suppuration. There is little tendency to recurrence, except in case of the not strictly neoplastic chronic granulomata secondary to chronic suppuration.

MALIGNANT DISEASE OF THE LUNG is not included in the subject for consideration in this symposium; but it seems necessary to state that the sooner the practitioner realizes that the diagnosis of any chronic inflammatory disease of the lung should never be made until malignancy has been excluded, the sooner will the surgeon cure large numbers of these patients. The day will come when practically every patient with incipient chronic pulmonary disease will have the benefit of a diagnostic bronchoscopy. When that day shall have arrived the thoracic surgeon will cure probably fifty per cent or more of the lung cancers. This opinion is based upon the well-known clinical fact that cancer of the lung is a slowly progressing, late metastasizing process that the surgeon could cure by lobectomy if only two or more years had not been lost by treatment based on an erroneous diagnosis of chronic infective disease before the patient reached the surgeon.

THE SURGICAL MANAGEMENT OF EMPYEMA*

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This paper presents a rather general discussion, dealing more with fundamental principles than with special technical points.

The empyemas which occur as complications of or sequels to cases of pneumonia are best adapted to form the basis of such a presentation. These postpneumonic cases form the very great majority of all empyemas coming to the attention of the general practitioner. They are encountered in five or more per cent of all cases of pneumonia. The infecting organism can usually be recovered in pure culture. The integrity of the chest wall is inviolate. The type of organism does not, *per se,* assure indefinite chronicity. Such cases present the simplest problems and best serve to exemplify fundamentals. They are freer from variable factors than are the empyemas resulting from thoracic injury or ruptured abscess, or occurring during the course of pulmonary tuberculosis. These latter groups are relatively uncommon, and also present much more complicated problems.

It is true that a collection of pus within the pleural cavity demands adequate drainage, even as does any other abscess. There exist, however, certain anatomic and physiologic conditions, peculiar to the thoracic organs, which restrict the latitude of surgical action. The surgeon may place an extremity at rest; even intestinal activity may be suspended for a period of days. Not so with thoracic organs. Their function must continue. Not only must respiration continue, but the flow of tidal air must be adequate to meet the demands of a body handicapped by recent acute disease. The pneumonia has already reduced vital capacity to dangerously low figures, and surgery may not safely reduce it to still lower levels. Therefore, whatever be the measures adopted to drain the empyema, they must not further reduce the flow of tidal air, and thereby increase the handicap under which the patient is laboring.

The effect which drainage operations exert on vital capacity will, in the final analysis, depend

*From the Surgical Service of the Robert Packer Hospital.

upon the presence or absence of adhesions between the visceral and parietal layers of pleura. Two entirely different situations may be imagined: one, a small localized collection of pus limited by definite boundaries where lung and chest wall are adherent to each other; the other, a large accumulation of fluid occupying the bulk of the pleural cavity and everywhere separating lung from chest wall. If, in the first case, a free opening be made for the purpose of drainage, respiration will in no way be impeded; probably it will be improved. If a similar type of operation be carried out in the second case, there is nothing to prevent an open sucking pneumothorax with collapse of the lung on the operated side, possibly with displacement of the mediastinum, and certainly with very marked respiratory embarrassment and diminution of vital capacity. Therefore, before institution of surgical treatment it is necessary to determine as accurately as possible the exact condition of affairs within the chest with reference to pleural adhesions.

Of great significance is the fact that the pleura reacts differently to the various organisms which are commonly encountered in postpneumonic empyema. These organisms are, in order of frequency, pneumococcus, streptococcus, staphylococcus, influenza bacillus, and other infrequent invaders. There exists a marked difference in clinical characteristics between empyemas due to pneumococcus and those due to streptococcus. In typical cases, pneumococcus empyema is a sequel to a lobar pneumonia, occurring after the crisis. The exudate is relatively small in amount, and tends to be limited by adhesions at an early date. There is comparatively little danger of creating an open pneumothorax by early operative care. Day by day the pneumonia is causing less impairment of vital capacity. The patient is able to withstand surgical trauma.

In typical cases, streptococcus empyema is a complication of a bronchopneumonia, occurring during the acute phase of the disease. The exudate is relatively large in amount, and does not tend to be limited or walled off by protective adhesions. The patient is still acutely sick, and vital capacity is still limited by the disease. The patients are unable to withstand severe surgical trauma. As there is danger of creating an open pneumothorax by injudicious surgery, great caution should be exercised in determining the policy to be followed in these cases.

There are many surgical procedures from which may be selected the particular plan of action for any given case. They fall, however, into certain general groups: simple intermittent aspiration; intercostal thoracotomy with "closed" drainage, either intermittent or continuous; intercostal thoracotomy with open drainage; thoracotomy with resection of one or more ribs; the "physiologic" operation of Pickhardt and Willy Meyer. Any procedure which has been advocated in the past will find a place under one or another of the foregoing headings. Each and every one of these operations has a distinct field of usefulness, and no one is all-sufficient to meet every situation which may arise. One may not be too narrow in his choice. The surgeon who would deal successfully with all empyemas, as they come to him, should be familiar with all of these procedures and the principles upon which they rest. Each individual case should be treated by the plan best adapted to it.

For the average pneumococcus empyema, rib resection and open drainage has withstood the test of time and become practically standardized, yielding a relatively low mortality. This same surgical plan gave an 84-per-cent mortality rate in one of the war cantonment series of streptococcus empyemas. The trocar-cannula stab operation is extremely valuable as a life-saving procedure in the desperately sick streptococcus cases, and may suffice to effect a cure. In pneumococcus cases it is not always adequate and may, in fact, be responsible for unnecessary chronicity, for by no stretch of vivid imagination can the heavy pus-fibrin clot which is almost always found in these cavities be expected to pass through the little 4-mm. tube that is commonly used in this operation.

Consideration of mortality risk demands conservatism in the initial approach, but once this risk begins to dwindle, two other risks loom large. They are the risks of chronicity and recurrence. Conservatism does not meet the requirements here; radicalism is more effective. During the present calendar year two cases have been encountered: a recurrence after fourteen years, chargeable to a faulty original operation (high axillary drainage of a posteriorly situated pocket); and a permanently impaired chest due to thickened pleura, twenty-five years after aspiration alone had been relied upon to cure an empyema. Undoubtedly, in both original plans nothing had been done to increase the mortality risk—and certainly not enough had been done to offset the other risks. The empyema is not cured until, in the words of Graham, "the cavity has been both sterilized and obliterated." Too few appreciate the significance of the two words "obliteration" and "sterilization."

Anatomic and physiologic factors peculiar to the thorax combine to delay cavity obliteration. In soft tissues, the walls of abscess cavities

readily fall together as the acuity of the inflammatory process subsides. Contracture of scar tissue hastens the final result. The usual empyema cavity is bounded by three structures: chest wall, held rigid and uncollapsible by the ribs; lung, normally on a stretch and dependent on negative pressure within pleural cavity to keep it fully expanded; and diaphragm. On the union and coalescence of these three structures depends obliteration. Naturally, continuous suction drainage will be a mechanical help—if it can be applied without jeopardizing the requisite of sterilization. So also will irrigation with antiseptics be helpful in promoting sterilization.

Both are valuable procedures. One brings mechanical aid, the other chemical aid to bear upon the problem. The problem, however, is surgical and is to be worked out by the responsible surgeon. Suction and irrigation are properly adjunct measures to a painstaking and diligent personal supervision. If these cases are retained in the hands of the operating surgeon until all tests and signs concur in stamping them as healed, the risks of chronicity and recurrence will be reduced to a minimum.

In conclusion, let it be said: study each case of empyema as an individual problem. Know the etiologic factors. Know the responsible organism. Know where the cavity lies. Know all that can be learned about pleural adhesions. In the face of mortality risk be *cautious*. As mortality risk diminishes be *bold*. As the case progresses be patient and unremitting in personal attention.

ABSTRACT OF DISCUSSION

Of Symposium on Thoracic Surgery

GEORGE P. MULLER, M.D. (Philadelphia, Pa.): We find it very difficult, from the standpoint of physical diagnosis, to be sure of the location of small collections of pus. In the diagnosis, the roentgenologist and the surgeon are equally necessary; and in the treatment the bronchoscopist and the surgeon are copartners, neither one being assistant to the other.

Dr. Butler was correct in stating that one must individualize the treatment of empyema cases, and not be limited to any single method. We have had a series of cases analyzed recently, and determined that with the so-called trocar drainage our mortality is 22 per cent; with under-rib drainage plus rib resection we have had a mortality of 4 per cent; and with rib resection alone, 11.5 per cent. From 1919 to 1922, when our service was badly organized, with only intern assistants, the mortality was 12 per cent; and from 1922 to 1926, 8 per cent—showing that we now have better individualization of our treatment. I have a patient on whom I did under-rib drainage ten years ago. He has now come back with an acute process. The cavity must have been present all this time, and in some way there has been a relighting up of the infection.

LEVER F. STEWART, M.D. (Clearfield, Pa.): The surgeon, roentgenologist, and bronchoscopist form a trinity capable of handling all surgical lesions of the chest. Inflammatory conditions of the chest properly fall under the guidance of the surgeon when pus has formed. In the past the chest has too frequently been opened for drainage without proper assurance of the presence of pus. Latterly the aspirating needle has come into more general use, with the only objection being the risk of disseminating pus through the pleural cavity to uninvolved structures.

Today, we routinely take all such cases to the fluoroscopic room, where, after proper preparation and sterilization, the exploring needle is directed to the pus collection along the shortest line between the surface and the visualized collection. If pus is obtained, the needle remains, rib resection is immediately done on the fluoroscopic table, and proper drainage instituted. This procedure reduces the amount of damage done to lung tissue by vicarious punctures and leads through an area where adhesions are more certain of giving protection to surrounding tissue. The method is more valuable and more necessary in dealing with encapsulated pus collections, but is indicated in all cases of pus in the chest.

Some years ago, before this Section, I described the flutter-valve tube for drainage of thoracic empyema. This tube has two flanges, one fitting tightly against the chest wall, the other fitting beneath the skin. In addition, the one tube has openings for the introduction of Carrell tubes. Imperfect contacts are made air tight by the use of vaseline gauze. The flutter valve gives an outlet for all accumulated pus, and will not permit the entrance of air into the thoracic cavity as a result of lung action. The tube can be introduced almost simultaneously with the opening of the chest. Gradual drainage from the chest inevitably results in expansion of the lung to fill the vacuum thus created. More experience in the use of this tube has made firm the conviction expressed when it was originally presented, that the time to operate is when the diagnosis of an infected empyema is made. Early drainage has been followed by no mortality. Our few deaths have occurred in those who have reached us in a toxic state bordering on the moribund. Early drainage reduces toxicity.

In our experience, the streptococcic cases are more slow in healing. Healing time in our empyema cases averages three weeks. In the pneumococcic infections we have not waited for sterile cultures after securing full expansion of the lung as shown by fluoroscopic examination. In the streptococcic cases we have continued Dakin treatment until practical sterilization has been obtained, even where early complete expansion of the lung has occurred. This procedure was dictated as a result of recurrence in two streptococcic cases.

Deep-lying pus collections sometimes can be drained by the bronchoscopist. It is desirable that they should be if possible. Peripheral infections away from large bronchi and infections within the pleural cavity always belong within the province of the surgeon. Fluoroscopic direction of the exploring needle will reduce to a minimum the instances of approach where adhesions are not encountered.

Bronchiectasis and bronchiectatic abscesses have long been discouraging conditions to treat. The inventive genius and skill of Dr. Jackson have invited renewed interest in this condition, and the surgeon would wish that bronchoscopic treatment would give a hundred-per-cent cure in these conditions. This, of course, is impossible. When bronchoscopic treatments fail after reasonable trial to cure the bronchiectatic conditions, the operation of Graham, in which the chest is opened

sufficiently wide to permit of cauterization and packing of the entire area, offers much hope of cure. I have twice used this procedure. In my first case, complete recovery and healing took place within three months. The second patient, who came to me in an extreme condition, with involvement of practically the entire lower left lobe, after 18 months has a bronchial fistula and morning cough. However, the improvement in cardiac condition, nutrition, and general health defies description. The girl at present attends school daily, and moves about as do other children.

In the conditions under discussion, nonsurgical measures should not be persisted in long enough to establish chronicity, for the problem then becomes much more difficult.

C. E. THOMSON, M.D. (Scranton, Pa.): Recently I saw a patient with a distinct shadow on the right side which was believed to be a lung cyst. On operation, it was found to be the liver which had pushed up the diaphragm, causing this shadow.

DR. BUTLER (in closing): Dr. Jackson is too modest in claiming credit for saving a great many lung abscesses from mutilating surgery. We have been using ethylene anesthesia, and prefer it in chest surgery if given by a competent anesthetist. The multiple-stage operation is preferable to an attempt to attain the entire objective in one stage. A living patient after three or four stages is better than an autopsy after one stage.

I should add an additional man to Dr. Stewart's team for thoracic work. The internist has a distinct rôle to play, and there is a very close association between him and the surgeon. The best of thoracic work is being done in this country.

Symposium on Practical Therapeutics*

INTRAVENOUS THERAPY

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The strong scientific appeal to the clinician for this method of treatment is quite apparent, and within the last few years intravenous therapy has come into great prominence. However, as a method, it is by no means new.

Stephen[1] says that the large amount of work in the seventeenth century in transfusion attracts one's attention, and that when we find the modern method of treating syphilis anticipated as the result of certain experiments made two hundred years ago, it makes one feel that after all few things are new.

We shall discuss this subject under two heads: First, physiologic solutions as intravenous therapy; and second, medicinal intravenous therapy. By the former we mean the injection into the circulation of such similar substances in solution as are usually present in the blood, to stabilize or activate the normal physiology of the blood and tissues. And by the latter, we mean injecting directly medicaments in solution to obtain well-known pharmaceutical results.

Williams and Swett[2] stress the importance of the hydrogen-ion method for determining the reaction of such fluids; they urge the slow rate of injection with fluids of higher or lower hydrogen-ion concentration, which the blood cannot readily neutralize nor buffer, in order to guard against chills or prostration; and call attention to the importance of such studies to the distilled water used, the dextrose solutions prepared, and the normal salt solutions kept in stock. They also feel that these solutions may easily be corrected as to their hydrogen-ion concentration by the addition of buffer salts, and believe that the buffering of glucose and normal salt solution, in their experience, has served to prevent these reactions.

Mellon, Slagle and Acree,[3] in their article on the practical application of so-called buffers, stated that their study was to bring clearly into view the scientific reasons why untoward reactions may thus be diminished in number and severity.

Voegtlin[4] says that the modern application of intravenous medication began with Baccelli's introduction of the intravenous injection of quinin for the treatment of malaria in 1890. About twenty years later the discovery and use of arsphenamin in the treatment of syphilis revolutionized medical practice in this respect. And further, this demonstration of the relative harmlessness of intravenous arsphenamin injections has prompted physicians to apply this method within recent years to other drugs and to other diseases, principally on the assumption that intravenous injection is of necessity followed by a more powerful therapeutic effect than is administration of the drug through other channels. Voegtlin lays particular stress on this point, as this misconception seems to be quite prevalent among physicians and pharmacologists, and it is largely responsible for the popularity of intravenous medication. He calls attention to the unscientific claims made by certain commercial interests which advertise a great variety of drugs put up in solution for intravenous use, and it appears not at all surprising to him, therefore, that serious reactions and even deaths sometimes occur from the too rapid intravenous injections of these drugs. Again, as regards the colloidal condition of the blood, information is rapidly accumulating pointing to the danger involved from the injection of foreign colloids into the blood stream. In his summary he states that a considerable amount of evidence has accumulated in recent years indicating that the nicely adjusted equilibrium of the blood and of the easily acces-

*Read before the Section on Medicine of the Medical Society of the State of Pennsylvania, Philadelphia Session, October 14, 1926.

sible tissues may be temporarily upset by intravenous medication and that this disturbance may give rise to undesirable symptoms and even death.

The first method—physiologic solutions for intravenous therapy—seems to us, then, the more desirable. An aim to stabilize, or as one might say naturalize, the fluids of the body, so that they take on normal physiologic functions, is both reasonable and attractive from a fundamental point of view. This is most simply shown by the introduction of normal salt solution, to which, with careful preparation, one cannot seriously object when the problem is urgent, as for example in hemorrhage and in great dehydration. Again, we subscribe to the use of glucose or dextrose, which is very much in the foreground at present, as an intravenous injection, with which, in some form or to meet some indication, we have almost all had experience.

The pioneer work of Litchfield in pneumonia and the recent work of Titus[5] in the toxemias of pregnancy have given cause for thought on these subjects, and made most of us their imitators. Our work in the Mercy Hospital with ten- to twenty-per-cent solutions of dextrose, as in other clinics, has shown striking results in the problem of counteracting the toxemias of pregnancy. To the larger percentages which are advised and are even on the market and which the general practitioners seem to use so freely, we are somewhat reluctant to subscribe, even in our own hospital work where one person supervises the preparation of all dextrose solutions and is responsible for their preparation and strength.

One of our colleagues, in a discussion of this subject recently, reported autopsies on two patients dying of pneumonia. These men had received injections of fifty-per-cent dextrose solution, and there was found a syrupy substance clinging to the valves of the heart which was probably a contributing factor toward the deaths which followed these injections. There seems to us, from this, the possibility of stressing physiologic correction—a desirable aim—to pathologic danger, and it makes us cling to the smaller percentages. Many years ago Ewing called attention to the value of sugar of milk in combating the toxemia of typhoid fever, and the worth of this we were amply able to confirm. During the last winter particularly, we have endeavored to meet the severe toxemias of pneumococcic lobar pneumonia by the intravenous use of ten-per-cent dextrose. From a review of the work of my colleagues, as well as from my own experience in Mercy Hospital we have been able to benefit some of these severe cases markedly, and have seen such results as to make us feel warranted in continuing intravenous dextrose solutions of a ten-per-cent strength in amounts of from two hundred to three hundred c.c. for the present, and to feel encouraged in expecting possibly more tangible results in our future work in pneumonia.

Bourne and Seibert[6] have contributed a useful study made with twenty-five strains of bacteria isolated from twelve distilled waters, with their results produced in rabbits by the injection of made aqueous solutions, emphasizing the importance of fluid preparations. Smith[7] states that certain blood changes resulting from the injection of large quantities of glucose solution are worthy of our consideration.

Bearing in mind the work of Williams, Mellon, and others, the justification of this method of administration of physiologic solutions of sugar, salt, and even water is established, and it may be applied to patients with marked dehydration of a serious type. The injection into the veins of dehydrated patients of normal salt solution, when the blood pressure is low and the vessels not sclerosed too greatly, we feel may have a useful place. This statement is made, being well aware as we are, that water and normal salt solution and dextrose solution by enteroclysis or by hypodermoclysis are readily taken up by most patients of this type.

Transfusion of blood, which has held the center of the stage for so long, has, as we well know now, very great limitations, of which only recently the profession seems to have become aware. When one has said that with the exception of recent hemorrhage and in certain hemolytic states its value is probably of little or no worth, even in the face of much disagreement, we feel its status has been declared.

The physiologic lack of calcium in the blood estimated by the biologic chemist in the hospital, may make a demand for supplying that element of the blood by the intravenous method when the time limit for raising this factor demands haste.

Insulin may be strongly indicated, and by the intravenous method may quickly correct a physiologic need and prevent disaster.

Our point is, then, that safeguarded physiologic substances in solution used for emergency to stabilize or to correct abnormal quantitative factors in the blood present the strongest plea and the most justifiable place for such a therapeutic method.

Concerning the second phase of our presentation, the Council on Pharmacy and Chemistry[8] reporting on this subject states that in addition to the broad general claims of superiority of intravenous injections over other methods of ad-

ministration—that is, of drugs—the following specific advantages are commonly urged in its favor: First, that it affords precision of dosage; second, that there is no irritation of the gastro-intestinal tract; third, that the drug is not altered or destroyed, as in the gastro-intestinal tract; and fourth, that the drug enters the blood stream without loss of time. There is a legitimate field for intravenous therapy, but these alleged advantages in the routine administration of drugs are more apparent than real.

The outstanding drug for intravenous therapy is arsphenamin. Of this we need say little, as others can speak more authoritatively than can we. Nevertheless, we believe that too much such medication is given; that it is given too readily by those of limited experience; that some technic is faulty; and further, that the old treatment of mercury and iodids, the former by inunction and the latter by mouth, may again come into its own, if it has not done so already.

The use of mercurochrome and other dyes for bloodstream infections, where we are usually clinically helpless, presented at first an attractive therapy. This is still strongly advocated by some clinicians, but Tunney and Lintz[9] have recently presented a study which is worthy of note. However, most of us consider mercurochrome far too dangerous in any strength as an antiseptic or excitant of tissue reaction to be included in the armamentarium of the internist. Davis,[10] in a recent article on the use of mercurochrome, concludes that, intravenously, this drug must still be considered to be in the experimental stage. Our experience with it has been small but convincing.

In regard to specific serums, particularly that applied to pneumonia, we feel that we can endorse only type-one serum, and that early. We desire to mention this because the practice of using polyvalent serum, or of giving type-one serum in pneumococcic lobar pneumonia, without typing, seems to be widely used. While the intravenous use of type-one serum, when used early, is a rational procedure, it does not even then give us great assurance of help.

The large doses of diphtheria antitoxin and antitetanic serum advocated and used in severe types of these diseases, we heartily approve, and feel convinced that we have seen lives saved repeatedly by such measures.

We seem to have some difficulty in explaining to our students about the use of strophanthin intravenously in a patient who has recently been sensitized to digitalis, but all clinicians who have seen this done must agree as to the danger or even disaster which may follow. As for the use of digitalis by the intravenous method, we can see no advantage, as the time factor for this drug to act seems somewhat fixed. It is, therefore, not a drug for emergency in the unsensitized patient. One can hardly conceive of an emergency requiring salicylates or iodids by this method, unless one aimed in the former at abortive medication for rheumatic fever, and this can be readily accomplished often by large doses of this drug by mouth in the first forty-eight hours (for the stomach is usually retentive), or, as some of my colleagues in the Mercy Hospital prefer, by the route of the bowel.

The intravenous use of magnesium sulphate[11] in ten-per-cent solution has been recently advocated and good results reported upon by two obstetricians, but here again we have medicaments as opposed to physiologic solutions, used for the same purpose (that is, toxemia of pregnancy), and we feel that the latter is more consistent with our own opinion and experience.

Of the new drug, ephedrin, with which we have had only a very limited experience, we can conceive of an occasion (for example, in great shock) where it could be used intravenously as one might use epinephrin, expecting much more prolonged action when compared with the latter. Epinephrin in very small doses and slowly administered, it has been said, can be administered for a protracted period in prolonged shock. The prospect, therefore, of so using ephedrin, which is far less toxic and holds many times longer in its action, may not be far off.

Dextrose feeding of definite caloric values by the vein in the starving; hypertonic solutions of either salt or sugar, thus given, to reduce intracranial pressure, or given when meningococcic serum is used, or to increase the activity of drugs otherwise given; and the intravenous use of calcium to activate the digitalis effect when that has seemed to be lost, or given in the night sweats of pulmonary tuberculosis, all have been proposed and demonstrated. And finally, protein therapy, under skilled supervision, may have and does have justifiable approval.

Our impressions are, then, that physiologic solutions, properly evaluated and prepared, accompanied by careful technic of administration, which are used to aid the normal factors of the blood, are justifiable and commendable, but that very few drugs should be so considered. We also feel that the indiscriminate use of either procedure should be disapproved, and that this method should be sanctioned only to the skilled syphilographer, obstetrician, surgeon, or internist, when used under hospital care, or when in conference with the consultant qualified to pass upon the method.

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NEWER DIURETICS

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The term diuresis, in the ordinary clinical sense of the word, denotes an increase in the kidney output, either of water alone or of both water and solids. Any drug or therapeutic procedure which will result in such an increased renal activity is to be classified as a diuretic. In this broad sense many drugs can be classified as diuretics which do not have any direct action on the kidney.

It is necessary to limit this paper to a discussion of those diuretics which have a direct effect on the renal secretory mechanism. From the theoretical and physiologic standpoint, this subject is most interesting in the light of the experimental studies of Richards, Hayman and Starr, McNider, and others on the secretory mechanism of the kidney. From the practical clinical standpoint, however, there is not much that is radically new in the methods of inducing diuresis. We must still rely on the well-known caffein group, such as caffein, theobromin, theocin, diuretin, etc., or on the renal irritants, such as squills and the heavy metals, especially mercury. These drugs probably stimulate renal function by simply increasing the blood flow through the glomeruli. Whatever the physiologic explanation, it is a well-proved clinical fact that they will in some cases bring about a definite increase in urinary output, mostly of water, but also to some extent of solids. This effect is not present in all cases, however, and at present we have no way of determining in advance which cases will give the desired response. The rapidly developing knowledge of the true physiologic activity of renal secretion will undoubtedly place the use of these drugs on a more rational basis, so that we may be able better to judge the circumstances under which they will be effective.

Particular attention has recently been directed to certain methods of inducing diuresis which have been very effective in some cases. Most notable of these newer methods is the attempt to replace the sodium radical in the blood and tissues with another radical, such as calcium or ammonium, and the use of certain mercurials, particularly novasurol. These methods have proved of great value in certain cases of edema and ascites. However, it is the opinion of the writer that they should be used only in carefully controlled cases, and that their indiscriminate use is dangerous. They are usually used simultaneously, but will here be considered separately.

The substitution of the sodium-ion is theoretically useful only in certain cases of edema or ascites as a means of facilitating the elimination of water. For the replacement of the sodium-ion in the blood and tissues, calcium was first used in the form of calcium chlorid, given by mouth. This was very irritating to the stomach, and hence ammonium chlorid is now recommended. It is given in 30-grain doses, three or four times a day, dissolved in a glass of water. It does not irritate the stomach, but it does cause the lowering of the carbon-dioxid capacity of the blood and tissues, and hence is apt to cause a so-called acidosis with resulting dyspnea. This may develop very rapidly, and necessitate the prompt administration of bicarbonate of soda. In cases of nephritis in which there exists an impairment of the acid-excreting function, the administration of ammonium chlorid may precipitate an extreme degree of acidosis which would prove fatal unless immediately recognized and treated. Therefore, ammonium chlorid should be used only in certain cases which must be selected by careful laboratory studies. Dyspnea from any cause, such as a cardiac complication or an acid retention is an absolute contraindication. The clinical conditions in which ammonium chlorid may be of real benefit and can be safely administered are: nephritis characterized by edema due to salt retention, with the functional capacity for acid elimination unimpaired; and ascites without cardiac complications. Aside from these selected cases, the use of ammonium chlorid does not offer much help, and may be distinctly dangerous.

The administration of novasurol hypodermatically has recently received considerable attention. Novasurol is a mercurial, and, so far as present knowledge admits, acts by irritation of the renal secretory apparatus, probably increasing the blood flow through the kidney. It has long been known that mercury is apt to damage the renal epithelium, especially when a nephritis already exists. Therefore, novasurol should always be

used with caution and particularly when there is any marked degree of nephritis. The following case illustrates this danger:

A man of 50 was admitted to the hospital suffering from emphysema and myocardial insufficiency resulting in extreme cyanosis and marked general edema. The blood pressure was 150, and the kidney function fairly good. The urine showed albumin and casts such as would be expected in the presence of chronic passive congestion. After a week of the usual treatment, it was decided to use novasurol to hasten the elimination of the edema. After the second dose he developed a complete suppression of urine. Sodium hyposulphite was given intravenously. For several days the suppression was almost complete, with gradually increasing toxic symptoms developing. By means of hot colonic irrigations, venesections, and glucose and bicarbonate intravenously, function was gradually restored.

From my observation of this case I believe that the prompt administration of the sodium hyposulphite saved this patient's life. Novasurol is undoubtedly of great value as a diuretic in certain cases, particularly ascites. However, one must never forget that it is a mercurial and may seriously damage the kidney, especially if a nephritis already exists.

In extreme cases more heroic methods of inducing diuresis may be adopted which depend on changes in the physicochemical composition of the blood. Thus the injection of hypertonic salt solution is often temporarily effective, and may aid in carrying the patient through an acute crisis. Twenty to one hundred cubic centimeters of 10-per-cent salt solution will usually stimulate a profuse diuresis. This, however, is in most cases temporary. The intravenous injection of 100 c.c. to 200 c.c. of 4-per-cent glucose and 4-per-cent sodium bicarbonate solution will also frequently bring about a diuresis which may aid in combating a dangerous suppression. Heat is often of some benefit, especially if applied by giving a high colonic irrigation at 120°.

The work of Richards, Hayman and Starr, McNider, and others on the physiology of the renal secretory mechanism is of very great interest, and should receive the close attention of all clinicians. Their studies have shown the relationship of the pressure and rate of blood flow in the kidney glomeruli to the urinary output. They have demonstrated that the caffein group of diuretics causes renal vasodilatation with a marked increase in the number of open glomeruli, and that this is accompanied by a corresponding increase in urine volume. They have noted, however, certain variations, which are due to other factors, some of which can be recognized and some of which are not evident. A continuation of these studies will undoubtedly eventually bring to light knowledge that will revolutionize our conception of diuresis. At present, in clinical medicine, we are relying on empirical knowledge in the use of diuretics, and we look to the laboratory for facts on which we may base more intelligent and effective methods of inducing increased renal activity.

Summary

There are no new diuretics which can be used indiscriminately in stimulating renal secretion, and clinicians must continue to rely on the caffein group and certain kidney irritants. In extreme cases, the intravenous injection of hypertonic salt solution or of glucose and bicarbonate solution will cause marked temporary diuresis. The use of ammonium chlorid should be restricted to carefully selected cases of edema due to salt retention in which the renal ability to excrete acids is not impaired, and to cases of ascites without cardiac or renal impairment. Ammonium chlorid is contraindicated in the presence of dyspnea. Novasurol is a mercury compound, and dangerous to use when there is any marked kidney damage.

IODIN THERAPY IN DISEASES OF THE THYROID GLAND

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The history of iodin as a therapeutic agent in the treatment of thyroid affections is fascinating. Coindet[1] in 1820 was the first to show the value of the element iodin in the treatment of goiter. Its worth, however, expressed in terms of the ashes of seaweed and sponges, had been shown six centuries earlier by Roger at the University of Salerno, Italy; while Russell in 1752 had demonstrated the value of sea water in relieving goiter. These two procedures are of particular interest in view of the present-day propaganda for the use of iodized salt and iodin-treated water.

In 1850, Chatin[2] presented evidence that iodin would prevent endemic goiter and cretinism, antedating the work of Marine and Kimball[3] by sixty-seven years. McGuire[4] in 1881 treated exophthalmic goiter beneficially with iodin, antedating by forty-two years the extensive study of the benefit of iodin in exophthalmic goiter made by Plummer[5] in 1923. This was followed closely by Kocher,[6] who presented an elaborate study in 1904, and who curiously enough at this time thought well of its use in the goiter of adolescence, but decried its use in exophthalmic goiter. This opinion was modified in a subsequent study in 1910,[7] when he believed it of value in all types except the adenomatous goiter —which is the generally accepted belief today.

The impetus for the present use of iodin in

goiter began in 1917 when Marine and Kimball[3] presented their monumental work on the prevention and cure of simple goiter among the school children of Akron, Ohio, which work was based upon the eradication of goiter among fish by Marine[8] in 1910.

To prove that the present iodin therapy is in a much confused state, one has only to consult his fellow practitioners or the voluminous literature. Such a study will show that the greatest need is an accurate diagnosis based on etiology and pathology which will better enable one to apply the appropriate measures in each case. At this point it is helpful to consider that all goiters and thyroid affections are due directly or indirectly to iodin deficiency.

The simpler the classification the better, and perhaps one understood by all is: (1) the simple goiter without symptoms typified by the goiter of adolescence and pregnancy, (2) the adenomatous goiter with and without symptoms, (3) exophthalmic goiter, (4) cretinism and myxedema, (5) cysts, (6) tumors, and (7) calcification.

Thyroid enlargement begins if the iodin content of the gland falls below 0.1 per cent, the normal gland containing 0.2 per cent, and the maximum being 0.5 to 0.6 per cent. The enlargement is due to an hypertrophy and hyperplasia of the gland tissue. Hence the two ideal periods for preventing simple goiter are *in utero* and at puberty. Iodin should therefore be given during pregnancy and at adolescence to insure a normal thyroid structure.

The hyperplasia may be regular or irregular; if the latter, adenomata are present. Many, if not all, are congenital, due to stimulation of the immature thyroid cells resulting from the insufficiency of the mother's thyroid. The remainder develop at puberty or during pregnancy. The treatment par excellence is the administration of iodin during pregnancy to insure enough for the fetus and mother, or in childhood at the first sign of thyroid enlargement. If adenomata are already present, they may be dissipated in childhood by carefully regulated doses of iodin. Later in life, adenomata are apt to undergo changes through hemorrhage, cystic degeneration or calcification, and carcinomatosis with an associated thyrotoxicosis. The administration of iodin in such a case is distinctly contraindicated, as the thyrotoxic symptoms will be aggravated if present or developed if dormant, since the symptoms are due to an excess of normal thyroid secretion. Rather, the indication is a thyroidectomy, as one is dealing with tumor tissue. A valuable aid in the diagnosis is a goiter firm and probably nodular on palpation, and of long standing, the average being fourteen years. There is also usually a history of palpitation, arhythmia, dyspnea on exertion, and an increased blood pressure gradually growing worse over a period of months.

Goiter of the exophthalmic type appears less than a year before the onset of symptoms; namely, tachycardia, asthenia, nervousness, increased basal metabolism due to endocrine dyscrasia, the thyroid and the cortex of the adrenals being particularly involved. The symptoms are due to an excessive amount of normal thyroid secretion plus an imperfect thyroid product. Kendall has shown that an iodin-poor thyroxin molecule is toxic.

A detailed consideration of all the etiologic factors entering into the development of exophthalmic goiter leads one too far afield for the scope of this paper. Briefly, however, the following have been proved, by careful research workers, to be factors: (1) infection,[9] (2) absence of regulatory action of the adrenal cortex on the use of thyroxin by the tissues,[10] (3) damaged sympathetic nervous system as in shock.[10]

Plummer finds that iodin is as useful in the treatment of exophthalmic goiter as is insulin in diabetic coma, rescuing patients from a moribund condition and the gastro-intestinal crises. These claims are substantiated by Starr and Means at the Massachusetts General Hospital in Boston, and by Mason of the Royal Victoria, at Montreal. The typical pathologic picture in exophthalmic goiter is an increase in the parenchyma due to hypertrophy and hyperplasia, the cells being columnar instead of cuboidal, the acini smaller, and the colloid diminished. The administration of iodin, as shown by Rienoff,[11] causes a return to the resting stage with a remission in symptoms, often abrupt and quite complete, but not permanent unless all other factors are corrected. As Bram[12] states, "the ideal prophylaxis of Graves disease begins in infancy and extends well into adult life, the object being an attempt at perfection in hygienic, dietetic, and mental discipline. A broad, comprehensive viewpoint will lead to a better understanding of the predisposing factors of exophthalmic goiter, and hence its prophylaxis." If, after a careful study of the case and treatment with iodin, symptoms still persist, thyroidectomy is indicated. The administration of iodin after thyroidectomy will depend upon the symptoms in each individual case.

According to Marine,[13] simple goiter and myxedema are different steps in the same underlying condition; viz., thyroid deficiency due to iodin deficiency, or, as was stated by Morel in 1864, goiter is the first step in the change which leads to cretinism—infantile or adult.

Iodin is not of as much value in thyroid deficiencies. The best therapy for cretinism is its prevention by the administration of iodin throughout pregnancy and the growing period. Too much damage has already been done *in utero* to treat a cretin with much success except with desiccated thyroid gland. The same may be said of myxedema, except in those cases where considerable active glandular tissue remains, then it is as efficacious as thyroid-gland administration.

Iodin is effective when administered in any form or manner. However, that the amount of iodin may be accurately controlled, the dose of any preparation used should be expressed in terms of milligrams of available iodin. The average-sized normal thyroid gland weighs about twenty-five grams. The normal iodin content of the thyroid substance is 0.2 per cent, or 50 milligrams. When the iodin content falls below 0.1 per cent thyroid enlargement begins, and a replacement of 25 milligrams of iodin is indicated. Quick results are obtained from iodin administration, for Marine[10] has shown that iodin is stored in the thyroid in five minutes after intravenous injection, and it is converted into thyroxin in twenty-five hours.

To obtain the best results, experience has shown that the maximum dosage for an adult should be 10 milligrams daily for not longer than a month,[14] during which time the patient should be under observation for pulse rate and nervous manifestations. For school children, the dose is 10 milligrams a week throughout the school year,[14] or more frequently over a period of two weeks twice a year. It is often given in larger doses in preparation for operation in cases of exophthalmic goiter, even as much as 200 to 300 milligrams a day for a few days. However, continued use of too much iodin will often again overactivate the thyroid gland.

There are various preparations of iodin or iodids available, and many preparations have been added through *New and Nonofficial Remedies* since the advent of iodin therapy for thyroid affections. It is claimed that these preparations are less irritating to the stomach and slower in absorption. In choosing a preparation, one should bear in mind the ease of determining the available iodin, its palatability, and its convenience of administration. For example, in the prophylaxis of school children, iodostarin, a chocolate confection, each tablet containing 10 mgms. of available iodin, is of great convenience. However, it is much more expensive than many of the older pharmacopeal preparations. Perhaps the one in greatest favor is Lugol's solution, which has the objection of being nauseating to some. Other preparations are the iodids of sodium or potassium, syrup of ferric iodid, and syrup of hydriodic acid. A table of these preparations with the percentage of available iodin and the doses expressed in the equivalents of iodin in milligrams, grains, or minims, is appended.

	Iodin Content	*Iodin per c.c. or gram*	*Dose*
Lugol's solution	12.6%	126 mg.	M.i to c.c.ii daily or weekly, as indicated, in water, milk, or cold grape juice
Potassium iodid	76.4%	764 mg.	Grs. 1/6 to grs. V daily or weekly in water or milk
Sodium iodid	84.6%	846 mg.	Grs. 1/7 to grs. IV daily or weekly in water or milk
Syrup ferric iodid	6%	60 mg.	M.ii to 3j daily or weekly in water
Syrup hydriodic acid	1%	10 mg.	M. XV in water daily or weekly
Iodostarin tablets (chocolate coated) each tablet 10 mgm. iodin			One a day or week

Many lipoid and protein preparations have been introduced with the claim that they are more palatable, less irritating to the gastric mucosa, and slower in absorption, which has the obvious advantage of not saturating the thyroid too rapidly, resulting in thyrotoxic symptoms. However, it is probable that the fewer preparations used, and the more familiar one becomes with the few preparations, the better understood will be the results obtained.

To recapitulate: The dosage of iodin for children is 10 mgm. weekly, the dosage for adults 10 mgm. daily, for two weeks two or three times a year. The dosage for adults with severe exophthalmic goiter in preparation for operation is 100 to 200 milligrams for a day or two. In long-standing goiters, better results are obtained by giving two to four grams of desiccated thyroid in 0.2-gram daily doses for an interval of two weeks, then iodin for about two weeks, twice or three times a year. The maximum reduction occurs in six or twelve months.

Of course the best means of securing iodin is through the diet. It is a noteworthy fact that individuals living on a diet rich in iodin seldom have thyroid affections. Such a diet, arranged in the order of richness in iodin content, follows: shrimps, crabs, lobsters, fish, scallops, clams, oysters, seaweed, irish moss, beans, bananas, asparagus, cabbage, mushrooms, strawberries, rice, carrots, peas, tomatoes, beets, potatoes, parsley, radishes, lettuce, turnips, melons, greens, whole grain cereals.

Iodin may also be added to the diet in the form of iodized water or iodized salt. In Rochester, N. Y., iodin is added to the drinking water in the proportion of 0.2 milligram of sodium iodid to a gallon of water for three weeks. When compared with the requisites for iodin, either in children or adults, it is seen that the amount of iodin in the water is too low.

In the last few years there has been much propaganda from the lay press, health organizations, and even physicians in favor of the routine use of iodized salt which contains about 0.2 per cent of iodin. It is estimated that the average individual ingests about ten to twenty grams of table salt daily, which would represent 20 to 40 milligrams of available iodin. In Wisconsin and Michigan, where iodized salt is extensively used, hyperthyroidism has greatly increased, this increase being largely in the toxic adenomatous type. The same observations have been made by Hartsock[15] at the Crile Clinic, and five similar cases have been noted at the St. Francis Hospital in Pittsburgh, where the patients had had no symptoms until after a prolonged use of iodized salt. It is readily seen that children should not be on the same dosage of iodin as adults, and further that each individual should receive his iodin according to his needs, bearing in mind that those with adenomata should receive none. Hence it is believed that the promiscuous use of iodized table salt should be discouraged.

Almost equally pernicious and disastrous is the use of too large doses of iodin, or its use over too long a period of time. This is probably the greatest error on the part of physicians today in the treatment of thyroid affections. Kimball has emphasized this in an analysis of 2,600 cases of hyperthyroidism.[14]

The main and practically only contraindication for the use of iodin in goiter is an adenoma or cancer in adults, as iodin in these cases practically always overactivates the glandular secretion, resulting in toxic symptoms. The therapy here, as in the case of tumors elsewhere in the body, is enucleation by surgery.

The dangers in the use of iodin are an adenoma or cancer of the thyroid, and its administration in too large doses or over too long a period. As in insulin therapy, the proper replacement of the deficiency is a wonderful advantage to the patient, while too much always results in an overactivity of the gland, with symptoms of hyperthyroidism in its various forms.

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ABSTRACT OF DISCUSSION

On Symposium on Practical Therapeutics

JOHN K. KISER, M.D. (Kittanning, Pa.): I wish to ask Dr. Johnston whether it is ever advisable to give dextrose intravenously when the patient can swallow.

JAMES I. JOHNSTON, M.D. (Pittsburgh, Pa.): Many patients demand dextrose intravenously, even if they can take considerable quantities by mouth. This we consider a very important point. For some time we have felt that the average pneumonia patient is fed far too much. We restrict feedings to a half-dozen oranges per day with a dram of sugar of milk, by weight, with each orange. We make further use of the mouth and stomach for large quantities of liquid. However, severe pneumonia seems to do well under dextrose given intravenously.

Symposium on Diseases of the Skin*

DISEASES OF THE SKIN OF INTERNAL CAUSATION IN CHILDHOOD

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Many dermatologic conditions are of internal causation, but these occur chiefly in the adult, and a certain number develop exclusively after puberty or at a still later period. There remain for discussion, therefore, thirteen conditions, some of which are rather closely related. Several occur more frequently in the adult than in the child, while a few are of rare instead of common occurrence.

ERYTHEMA SIMPLEX.—Toxic erythema is a symptom of some internal derangement. This eruption may be seen sometimes preceding or in the course of some systemic diseases, such as vaccinia, diphtheria, variola, and influenza. It rather frequently occurs some days after an

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injection of antitoxin, and also the ingestion of a certain drug in the child with an idiosyncrasy. The erythema infectiosum of Escherich, Shaw, and others appears in children in the spring and summer, and is characterized by a somewhat generalized macular and patchy erythema, more especially on the face, legs, and arms, with slight systemic disturbance, and due to a mild toxemia of gastro-intestinal origin. The toxic forms of erythema may be almost generalized, rather generally located, or comparatively localized. In extensive cases there may be a mild hyperpyrexia and some nausea. An eruption of this type may last but a few hours or at most but a few days. Infants and young children are very subject to attacks of this character following even a mild gastro-intestinal upset.

Erythema Scarlatinoides.—The possibility of this condition should be recalled as a help in diagnosing scarlatina. This disease starts with a gastro-intestinal upset, a temperature of not more than 100° Fahrenheit, a mild pharyngitis and tonsillitis, an absence of the strawberry tongue, and an eruption which may or may not involve the face, and of a general or almost complete distribution. If the face is involved the eruption fades in a few hours, while the rash on the body fades in two or three days. Desquamation starts in about four days, and is completed about one week later.

To emphasize again, there is absence of strawberry tongue, no onset with vomiting, only mild constitutional symptoms, a rather rapidly fading eruption, desquamation of only a few days' duration, an absence of complications such as nephritis, and recurrence is frequently seen.

The etiology of this condition is the eating of various articles of seafoods such as shellfish, spoiled meats, the ingestion of certain drugs, such as quinin in those with an idiosyncrasy, and various toxemias, general or intestinal. Other causes which have been cited as causal are disturbance of the nerve centers, direct irritation of the peripheral blood vessels or nerves, or disturbances of reflex origin.

Erythema Multiforme.—This affection is characterized by the development of a rather symmetrical eruption on the backs of the hands, the forearms, and the lower legs, and in more extensive instances the sides of the neck and face may show involvement. The eruption consists of red spots and elevated lesions, usually dry, but occasionally there may be vesicles and blebs. This disease constitutes about one per cent of all skin cases, and although more frequently found in the adult, it may be observed in the child.

Intestinal toxins are often causal, and probably toxins from other sources. Stale articles of food, especially meats, oysters, fish, crabs, and lobsters, may cause an outbreak. The more severe instances are thought to be of an infectious nature. In the latter type the eruption is probably only part of a general toxemia or infection. It has been suggested that the eruption may be due to absorption from the intestinal tract of imperfectly digested or improperly broken up protein; in other words, to anaphylaxis or hypersensitiveness to a foreign albuminoid substance. Focal infection may be causal. Urethral irritation may produce an outbreak. The eruption is frequently seasonable, appearing chiefly in the spring and autumn. Recurrence is apt to develop.

Erythema Nodosum.—The eruption in this affection is found symmetrically over the tibiæ, and distinct nodes (pigeon's-egg and larger in size) are observed. These swellings undergo all the color stages of a bruise, starting with a pinkish or bright red color. The lesions are tender to the touch, and although firm in the beginning, soften, and fluctuation is observed, but the surface never breaks. The disease runs a course of ten days to three weeks, and does not tend to recur. Mackenzie's statistics of 108 cases give 14 under the age of ten years. Females are attacked approximately four times more frequently than males. The affection tends to develop in cold and damp weather, in weak and anemic subjects, and in those with a rheumatic tendency. Auto-intoxication, certain drugs, particularly antipyrin and the iodids, and digestive disturbances have been mentioned as causal.

Urticaria.—Wheals or hives are of frequent occurrence, and they are most often observed between the ages of early childhood and middle adult life. The papular type, so-called "lichen urticatus" is almost exclusively found in childhood, and is more frequent in England than here. The cases seen in this country develop most often in the foreign-born, particularly those of Russian Jewish parentage. The eruption is quite characteristic, starting with a typical attack of hives, which is followed by a papular eruption, chiefly located on the extremities, and next most frequently on the buttocks and the face. The itching is intense. The condition runs an extremely chronic course in many instances.

The gastro-intestinal tract is our first thought in these cases, and the following foods have to be particularly considered: oysters, clams, lobsters, shrimp, mussels, fish, pork, sausage, scrapple, veal, nuts, mushrooms, strawberries, and cucumbers; although there are numerous instances of personal susceptibility to such articles as butter, oatmeal, milk, eggs, and various meats

and vegetables. The irritation from intestinal worms, a phimosis, or long foreskin, may cause this trying affection in children. Antitoxin frequently induces an acute attack. Drug susceptibility may produce an outbreak in childhood and the list of these provocative medicaments is long, including particularly quinin and the coal-tar produts. Numerous other causes have been cited, but those mentioned are the ones chiefly etiologic in children.

Urticaria Pigmentosa.—This disease should be considered, although it is rare. The affection starts in childhood, and the onset is observed as a typical attack of hives which is followed by pigmentation, more or less permanent, at the site of former wheals. Although the etiology is somewhat obscure, one must consider a gastro-intestinal origin.

Angioneurotic Edema.—This type of outbreak is frequently an associated symptom of urticaria, and is characterized by large swellings, usually on the face, of a reddish color. The same etiologic factors have to be considered as in urticaria.

Psoriasis.—The characteristics of the disease are the development of more or less numerous, dry, reddish, variously sized, rounded and sharply defined, thickened patches, covered with a whitish scale, and tending to attack chiefly the scalp and the extensor surface of the extremities. The cause of the disease is unknown, but as it may be found in association with rheumatic affections, and as a certain percentage of cases develop in childhood, it should be mentioned.

Eczema.—In the past this has been the diagnosis given to many skin eruptions. The variety which chiefly interests us attacks the face in infancy or childhood. There is no outbreak more trying to the young mother than the sight of her baby's face covered with a bright red, oozing and crusted eruption. This condition is undoubtedly produced in many instances by food, and the inability of the infant to digest certain formulæ. Personally, I believe the fat percentage is most frequently at fault. Focal infection and reflex causes have to be particularly considered in those beyond the age of infancy.

Herpes Simplex.—Cold sores or fever blisters are prevalent in childhood. The producing factors to be particularly considered are colds, fevers, and digestive disturbances. Reflex irritation has to be eliminated. The outbreak is frequently found in association with pneumonia, malaria, and cerebrospinal meningitis. Herpes progenitalis may be found as an associate of a long foreskin. Recurring herpes may develop at a point of injury, and be observed at certain fixed or indefinite intervals.

Herpes Zoster.—Shingles is a disease comparatively seldom found in childhood. Although it is most often seen in association with cold and wet, it may develop reflexly from functional or organic disease. A few instances have been reported following vaccination and also chicken-pox.

Henoch's Purpura.—This rare affection is observed principally in childhood. Osler cites the following characteristics: relapses or recurrences extending over several years; cutaneous lesions, which are those of erythema multiforme rather than simple purpura; gastro-intestinal crises, such as pain, vomiting, and diarrhea; and hemorrhages from the mucous membranes. Albumin may be found in the urine, or in aggravated cases there may be an acute hemorrhagic nephritis, and there is an enlargement of the spleen. Syers is inclined to believe that it is somewhat allied to scurvy, and that it is associated with unhygienic conditions and insufficient food.

Tuberculosis of the Skin.—This affection is observed in various forms: the ulcerative type, tending to occur around the mucous outlets, such as the corners of the mouth; the miliary type, which may show a rather generalized eruption consisting of papules or small tubercles; lupus vulgaris, chiefly observed around the face, and characterized by confluent tubercles which form patches, have a slow growth, and tend to ulcerate; the warty type mostly observed on the finger or hand, and usually of external origin; and scrofuloderma, tending to attack the lymphatic glands of the neck. Comparatively few cases are observed in this country, the majority are observed in Austria, France, and Great Britain.

The condition usually develops in childhood. According to Colcott Fox, an analysis of 96 hospital cases showed that more than half began before the age of ten years, and 64 of these patients were females. Warty tuberculosis and the ulcerating type are more often seen later in life. Bender found that in 159 cases, there were 99 patients in whom present or past evidences of tuberculosis existed. A hereditary predisposition was noted in slightly over 33 per cent. Statistics of other authorities, such as Colcott Fox, Block, and Sachs, show the predominance of other evidence of tuberculosis in those with a tuberculous eruption.

According to LeCoir, the tubercle bacillus gains entrance to the integument in one of the following ways: by direct inoculation from without; indirect inoculation by continuity from deep tuberculous foci; inoculation by way of the lymphatics or the veins passing through a tubercu-

lous focus more or less remote; infection of hematic origin; infection by inheritance.

Syphilis has purposely been eliminated from this article, as only the congenital variety could possibly be considered.

Emphasis is again strikingly placed, in the perusal of this short article, on the facts that the prophylaxis for many of the dermatologic conditions in childhood is regulation of the diet, and the cure, free elimination.

HYPEREMIAS OF THE SKIN ASSOCIATED WITH INTERNAL CONDITIONS

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For the purpose of this paper the term hyperemia of the skin designates not only an active or passive congestion, but also includes certain inflammatory and exudative diseases as well. In the light of our modern microscopic technic, it is now an accepted fact that all hyperemias are clinical manifestations of inflammatory phenomena. In certain instances the hyperemia may be so mild and the causative factor so fleeting in character that clinically the phenomena of inflammation is not apparent. Nevertheless, even these tissues, when submitted to histopathologic examination, show definite inflammatory changes such as dilatation of the blood vessels and cellular infiltration.

It is obvious, then, that the term hyperemia is applied to a class of skin diseases in which this symptom is the prominent but not necessarily the exclusive manifestation. Clinically, hyperemia is characterized by redness which is momentarily removable by pressure. The skin feels hot to the touch and is accompanied by an itching or burning. The shape of the lesion is indefinite and poorly defined at the border. In size it varies from a split pea to a large patch, and the duration may be a matter of a few hours or several days.

Colcott Fox was the first to divide the hyperemias into those due to internal causes and those due to local irritation, of which the former shall be considered in this paper. To gain an accurate conception of the relation of hyperemia to internal medicine, it is essential that we constantly bear in mind the fact that hyperemia, except in cases of definite evidence of local irritation of the nature of chemicals, heat, cold, etc., is only an objective symptom, and not a disease *per se*, and that there is no one cause of this manifestation. The relationship of hyperemia to constitutional disturbances has been noted by many observers, but none of these investigators has centered our attention on the subject so forcibly and so vividly as did Osler. He not only stressed the relationship between the clinical or external manifestation and the internal causative factor, and the relationship of certain of the hyperemias to each other, but also called attention to the grave abdominal and visceral symptoms that often accompany slight external manifestations, especially in children. In a number of his cases, the skin condition was almost entirely ignored, and the diagnosis of an acute surgical condition of the abdomen was made. In the cases where the erroneous diagnosis was followed by an exploratory laparotomy, a hemorrhagic infiltration of some parts of the bowel would be the only evident pathology. I should like to cite briefly a case which I have recently observed:

J. S., aged 12 years, complained of itching and burning around the eyes before retiring. On arising in the morning he proceeded to the bathroom for his usual bowel movement, which this morning consisted of an enormous hemorrhage of bright red blood and a complete section of the mucous membrane of the bowel about eight or nine inches long. Following this the temperature rose to 102°, and on account of the hemorrhages and the acute pain which developed in the abdomen, a surgeon was called in. Intussusception was suspected. There was slight rigidity over the lower abdomen. Bleeding continued from the rectum, and the temperature rose to 104°. On the advice of the surgeon the case was kept under observation for several days. The child continued to grow worse, but in spite of the graver symptoms the surgeon still advised observation. About the tenth day the bleeding stopped, and the child gradually improved. After the acute abdominal symptoms had cleared up, attention was called to slight urticarial symptoms on the hands and face. The diagnosis was then made of erythema with grave intestinal symptoms.

We are indebted to Engman and Weiss for the comprehensive outline relative to the etiology of hyperemia due to internal causes. These hyperemias may be brought about by: (1) the ingestion of poisonous bodies such as drugs, canned fish, spoiled meat, strawberries or other articles of food; (2) the entrance into the circulation from the alimentary canal, usually from the intestines, of some poisonous body which may be formed by the action of certain organisms on food stuffs; (3) intermediary intoxication occurring in the process of metabolism; (4) parenteral introduction of fresh protein which would encompass the at present mysterious and confusing phenomena of anaphylaxis and sensitization; (5) the development of toxins through the invasion of the body by any microörganisms, under which may be included not only erythema and roseola eruptions, produced and classified under the name of the specific exanthemata, but also those eruptions which more properly belong to the erythema group, occurring either early in the course of the invasion or later in the course of the disease.

The part played by the endocrine glands in the production of hyperemias is undoubtedly an important one, but with our present lack of knowledge of the function of these glands, the exact relationship between the hyperemias and the glands is but poorly understood. Concrete instances of the endocrines as etiologic factors are the "hot flashes," redness, and burning that are experienced at the menopause, and the entity known as dermatitis dysmenorrhea which is characterized by a symmetrical dermatitis of the face and extremities. A better knowledge of basal metabolism and its interpretation may eventually lead us to determine more accurately the exact cause of some of the conditions ascribed to the endocrines.

All these hyperemias are blood-borne or humoral, and any process that would allow the access of a toxic body into the blood stream may cause some type of these eruptions.

There is also that phase of hyperemia which accompanies heart and kidney diseases known as passive congestion which is usually seen on the extremities and is due to failure in cardiac compensation.

Treatment

The obvious treatment for any condition is the removal of the cause, but in a great many of the hyperemias the causative factor ceases to exist after the damage to the skin has been done. This is especially true in acute urticaria and the erythema-multiforme group of diseases. The protein sensitization tests, while valuable in certain cases, have proved disappointing in a great many instances, for we obtain negative test readings even where we feel certain that a specific protein is the causative factor.

The removal of foci of infection, such as tonsils, decayed teeth, or prostatic pus, is important, for an obscure hyperemia may often be benefited by these procedures.

In erythema multiforme and acute urticaria, as well as lichen planus, the intravenous injection of benzoate or cyanid of mercury not only shortens the duration of the disease but alleviates its itching almost immediately.

The giving of endocrine or glandular extracts for the relief of the supposed endocrine conditions is, at its best, only guesswork.

Those hyperemias that accompany cardiac lesions are relieved only by rest and proper treatment of the heart condition.

Insulin has been found to be a very excellent remedy in certain hyperemias occurring in diabetic subjects.

Any of the mild local applications will suffice for the external manifestations, provided the causative factor has been corrected.

Conclusions

The fact should always be borne in mind that most hyperemias are only external manifestations of some internal condition.

Not enough stress is laid upon the internal treatment of external manifestations, and more attention should be paid to the determination and correction of the cause than to the treatment of the hyperemia itself.

Keen observation of the skin may often lead to the diagnosis of some obscure internal condition.

Closer coöperation between the internist, dermatologist, and laboratory worker may lead to the solution of some of the obscure problems which now confront us in dealing with a number of the hyperemias.

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LEG ULCERS

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An ulcer is a lesion of the skin or mucous membrane characterized by loss of tissue, more or less superficial, with slight tendency toward spontaneous healing.

Etiologic Factors

Predisposing influences to chronic ulcer are alcoholism, anemia, diabetes, syphilis, cardiac and nephritic diseases producing chronic edema, and any nervous disease affecting the nutrition of the skin. Local conditions favoring it are eczema, varicose veins, edema, dermatitis, and infected insect bites, particularly "vagabond's disease" which causes violent itching and scratching in those whose personal hygiene is at a low ebb and who are weakened by lack of proper food, sickness, or alcoholism.

Eczema may be a prominent factor, or secondary only. It may occur as the dry papular form or as a vesicular eczema. The surrounding area may be reddened, pigmented, or perhaps may show purpuric or petechial spots. The itching may produce excoriations or abrasions, infections, crusts, and ulcers.

Varicose veins are often associated, but frequently are not the sole cause, hence this adjective is often erroneous and should not be used indiscriminately.

Dermatitis is usually seen in the early stages of ulceration, or after neglect, or as the result of bad therapy. The immediate cause is usually traumatism, such as a blow on the shin, a scratch from the nails, or spontaneous rupture of a dilated vein. Improper local applications or infections of excoriations may spread the skin necrosis and start an ulcer which is cured only

after several weeks' duration. Hence, many may be termed chronic even from the beginning.

The Common Leg Ulcers

The chronic ulcer is usually solitary, round or oval, floor uneven, often showing granulations, edges everted and thick, but not sensitive. The common site is the lower third of the leg, often close above the internal malleolus. When the microbic invasion is profound, the ulcer will spread with great rapidity, become very large, and is then sometimes spoken of as "phagedenic."

Two things should be considered in treating chronic ulcer; removal of the cause so far as possible, and measures intended to convert the indolent ulcer into a healthy granulating wound. If it be merely an incidental feature of some other disease, it should be treated upon principles intended to eradicate the underlying disease.

A purely varicose ulcer is often easily healed by use of a properly fitting bandage, but occasionally may require removal of tortuous distended veins.

The particular local remedy selected depends entirely on the condition of the ulcer. If it be acutely inflammatory and infected, as it often is when first seen, a 2-per-cent solution of boric acid and resorcin for constant use as hot moist compresses and for daily bathing, is very effective, gratefully received, and often all that is needed. I discourage the use of strong antiseptics. If stimulation of granulation tissue and epithelium is needed, an ointment of 5-per-cent balsam of Peru in vaseline is very effective. Scarlet-red ointment also has its advocates, or an ointment consisting of Rubbler's basic fuchsin, 1 gr.; oil of eucalyptol, 5 c.c.; and anhydrous wool fat, 20 c.c. C. J. White considers this very efficacious and quite drying.

Of prime importance is the removal of edema, or, as White so aptly terms it, "draining the bog." He stresses this feature, and compares our success or failure to the difference in vegetation of marshy land before and after drainage. Edema may be soft and compressible, disappearing at night and returning during next day, or of boardlike hardness, seriously interfering with local circulation. Rest in bed with foot of bed elevated 6 inches is ideal for rapid healing, but such patients seem to have a tendency to recurrences unless we guard against the change in leg circulation after the patient leaves his bed by use of a well-fitting elastic bandage or stocking. We have known patients with a leg ulcer of years' standing who suddenly develop an illness requiring hospitalization, when even an exceedingly obstinate ulcer will heal without any special effort during the hospital stay. Rest in bed should probably be our first advice, but unfortunately many patients can ill afford to be hospitalized or even to remain in bed at home, and the problem will then be to heal the ulcer while the patient walks all day or, worse yet, stands all day. We, however, have the consolation that such cases, when healed, are less apt to recur.

These ambulant patients should wear a properly applied rubberless bandage, such as a Bender or Ace bandage, the cloth of which has a natural elasticity that is improved by washing. It should be from 2½ to 3 inches wide, and reach from base of toes to knee, omitting the heel. In the morning the bandage should be applied over the proper local dressing before the patient gets up, with the leg in a horizontal position, and should be worn all day and not removed till the foot of bed is elevated and the patient has retired with the leg again in a horizontal position. Healing is often prolonged by the least possible slip in the technic, such as putting the leg over the side of bed without bandage, getting out of bed without bandage, a rough, ill-chosen dressing, an alcoholic episode, a change of physician, or failure to call the physician regularly.

A daily hot foot bath will greatly aid circulation, and in a few days soften and reduce an old hard edema.

Practically all ulcers due to local causes and those due to constitutional disorders, with few exceptions, can be cured by ambulatory methods. The "ulcer kit" of the Massachusetts General Hospital consists of two blocks six inches high to elevate the foot of the bed, one or two rubberless elastic bandages, and the local dressing best suited for the patient. To prevent recurrences it is well to continue the use of the elastic bandage for some time after healing.

Special Methods of Therapy Used in Chronic Ulcer

Hollander has had marked success in healing old ulcers by means of a rubber sponge bandaged on the ulcer. The movement of the sponge during movements of the patient has a splendid influence in aiding formation of granulations and rapid closing of the crater. The sponge is removed daily, washed thoroughly, then reapplied.

Unna's sealed gelatin paste is valuable in indolent ulcers. I have used it with marked success in several cases. A woman aged 55 years, with a large ulcer of 20 years' duration, a man aged 45 years, with a fairly large ulcer of 1 year's duration, and a woman aged 37 years, with a large and very deep ulcer of 10 months' duration, had complete healing in 3 months, 4 months, and 1 month respectively. I melted the paste by heat; then painted it on the leg with a brush, from the knee to the toes, leaving the heel bare. A roller bandage was immediately

placed over the paste. A second painting and bandage were applied, and finally a third painting of the paste. This was allowed to dry before the patient left the office. The patient returned about every two weeks for a similar treatment. It is somewhat painful for a few days, but patients soon learn that it is doing the work, and return for future dressings until healed. A blackish or brownish discharge may appear on the surface of the dressing which may frighten the patient, but he can be assured that this is of no consequence.

Ultraviolet-ray exposures with boric-acid ointment locally were used in treating a man, aged 21 years, who had three traumatic ulcers of 2 months' duration; a man aged 28 years, who had a deep traumatic ulcer of 10 month's duration; a woman aged 32 years, who had a traumatic ulcer of 2 months' duration; and a woman aged 31 years, who had a deep chronic ulcer of 2 years' duration. The first three patients all healed in from 2 to 3 weeks, and the fourth in 3 months.

Dunnington's formula was used by Davis at the Barnard Free Skin and Cancer Hospital, of St. Louis, during the last 2½ years on all cases of traumatic and varicose ulcers, and he says that "complete failures are unusual." He reports 55 cases in the service of Engman and Mock, with a good percentage of cures, and his conclusion is that "it is at least a valuable additional method in combating this stubborn affection." Dunnington's formula consists of boric acid, 63 gms., potassium hydroxid in stick, 28 gms., heated with 150 c.c. of water in a porcelain dish, allowed to cool and filled to 200 c.c. by adding water. Crusts, if present, are removed. The solution, diluted to half strength, is applied three times weekly by the physician. After a few minutes, strips of muslin covered with Lassar's paste are applied. These are renewed twice a day by the patient. The strength of the solution is increased according to the patient's tolerance. Indolent ulcers bear full strength well. Some pain follows the application for a few minutes.

Van Balen reports an ulcer of 3 years' standing in a woman aged 62 years, bedridden from the cachexia and threatened gangrene of the foot. He applied a hot-air box to the leg for 3 to 6 hours a day at 39 degrees centigrade. Relief from pain was prompt, and healing was complete in 12 weeks. He used it in other cases, and in the majority cure was complete in 3 weeks. The leg was exposed bare in the oven, and when outside only a protecting bandage was worn.

Syphilitic gummata often break down into ulcers, the leg being a common site. Hazen says if they occur within two years from onset, they are apt to be roughly symmetrical and numerous; but if later, as they generally do, they are apt to be asymmetrical and few in number. They seem prone to occur on the upper half, or if on the lower half, are likely to be seen on the upper portion of the leg also. The ulcer is often characteristic. It may be round, oval, kidney-shaped, or semilunar, walls descending at right angles and quite deep, so that the term "punched out" is used. The base may be covered by a thick tenacious secretion or, if secondary infection occurs, it may be frankly purulent. If several gummata be closely approximated and ulcerate, they may become confluent, forming a large ulcer several inches in diameter. The ulcer may be covered by either thin or rupial crusts. The surrounding area is indurated, with a reddish or purplish areola. The ulcers eventually heal by formation of granulation tissue and rather smooth white scars.

I should take a blood Wassermann in all cases of leg ulceration, and, if positive, institute specific therapy, though less vigorously than if early, as this is a tertiary lesion. Schamberg says "weekly injections of neoarsphenamin for five or six weeks associated with the use of the iodids, and followed perhaps by iodids and mercury, constitute in a general way the treatment to be employed." I treated a boy, aged 11 years, who had a strongly positive Wassermann, Hutchinsonian teeth, and several small deep ulcers along the anterior surface of one leg of 2 years' duration, in whom one injection of neoarsphenamin entirely healed the ulcers. If I were treating an ulcer in a patient with a negative Wassermann, which refused to heal after a fair trial, I should at least give a therapeutic test of specific therapy and take a second Wassermann. On the other hand, one should not forget that a patient may have a nonsyphilitic ulcer, despite the fact that he has a positive Wassermann.

Locally, syphilitic ulcers are treated as any ulcer, with measures intended to overcome infection and promote granulation.

Ecthyma is not a distinct disease, but a streptococcic infection closely related to impetigo contagiosa, differing, however, in that the deeper or connective tissues are invaded, and that it often involves the legs. The ulcers are multiple, deep, crusted, and from the size of a finger nail to that of a large coin. It occurs in the lower walks of life, being common in slum dwellers and prison and poorhouse inmates who frequently are infested with pediculi, bedbugs, or the itch mite, causing intense itching and excoriations which become infected, crusted, and ulcerated.

Improper hygiene, poor food, and debility play an important rôle. The treatment consists of getting rid of the underlying factors, such as parasites, improving the living conditions, and the local use of moist antiseptic dressings or a mild ammoniated-mercury ointment.

The Less Common Leg Ulcers

Diphtheria of the skin may resemble impetigo or may produce a deep gangrenous ulcer, probably less common on legs than trunk or some other areas. It may be primary to the skin or secondary to a throat infection. It is treated by the early and efficient use of diphtheria antitoxin.

Erythema induratum, or Bazin's disease, is a rare disease in which deep-seated small nodules occur. They are multiple, symmetrical, apt to occur on the back or sides of the calves of the legs, in girls of the poorer classes, from 12 to 20 years of age, who are much on their feet, who are cachectic and strumous, and whose peripheral circulation is poor. It is closely associated with a tuberculous personal or family history. The nodules often coalesce and break down into irregular sluggish ulcers. The treatment leaves much to be desired. Mild antiseptic dressings locally, and a well-applied bandage may be worn. Prolonged rest, with elevation of legs, good food, tonics for cachexia, and fresh air are strongly recommended.

Sporotrichosis is a fungous infection that may occur on the leg. If it begins on the foot, it is liable to extend upward on the leg along the line of the lymph channels in the form of few or many cutaneous or subcutaneous nodules. Later the nodules may ulcerate, giving rise to a serous or gelatinous discharge. Fistulous tracts may communicate with deep-seated abscesses. The mold can be demonstrated by smears or culture. Iodids internally and solutions of iodin or diluted Lugol's solution locally are specific, with cure in a few weeks.

Coccidioidal granuloma is a rare fungous infection closely allied, if not identical, with blastomycosis. It may occur on the legs. Blastomycosis, a yeast infection, shows as a papule on which a warty growth develops. The area soon becomes studded with minute abscesses that exude pus from which the fungus can easily be demonstrated. The lesions of coccidioidal granuloma seem to be deep, and show a tendency to early ulceration. The disease has been fatal in nearly all reported cases.

Radiodermatitis, or burns from overuse of x-ray or radium, may consist of erythema, desquamation, blebs, deep ulceration, or dry gangrene which sloughs, leaving a deep ulcer which is extremely painful, very indolent, and difficult to heal. It often shows no tendency toward healing, and may become cancerous. These dangerous agents should not be employed carelessly nor too vigorously, and only by those who are skilled in their use.

Dermatitis artefacta or factitia is a self-inflicted mutilation generally produced by emotional individuals or malingerers for the purpose of exciting sympathy or escaping duty. The lesions may be single, few, or many. The agents used may be friction, splinters, knives, scissors, or more often escharotics of which carbolic acid is a favorite on account of its known destructive action. The artificial characteristics often betray the lesion, as they hardly conform to any ordinary type of skin lesion. They may be round, oval, linear, or angular with sharp borders, and the irritant may trickle down over the sound skin. They occur on sites easily reached by the right hand, as the face, left arm or hand, chest, and legs. The lesions may be erythematous, bullous, gangrenous, or gangrenous ulcers, with bases quite black. One should handle such patients carefully till he secures evidence of the nature of the injury, then confront the patient with it. Often a fixed dressing will aid greatly in determining the nature of the injury.

ABSTRACT OF DISCUSSION

On Papers of Drs. Knowles, Strauss, and Barr

Frank C. Knowles, M.D. (Philadelphia, Pa.): Labarraque's solution in the strength of a teaspoonful to a glass of water is one of the best means for healing leg ulcers.

P. E. Biggins, M.D. (Sharpsville, Pa.): Several years ago a number of different treatments for leg ulcers were tested in England in, I believe, 200 cases. In half of these, a tenth grain of suprarenal extract and a small amount of calcium salts were administered internally, and much better results were obtained than by other methods.

Case Reports*

PNEUMOCOCCUS MENINGITIS SIMULATING DIABETIC COMA, WITH RECOVERY

ALBERT E. ROUSSEL, M.D.

PHILADELPHIA, PA.

G. B. M., male, aged 40, salesman, was admitted to Medico-Chirurgical Hospital on November 1, 1923. The family history was unimportant. The previous history was negative except for severe pains in the head for the past six weeks. During an altercation following a slight automobile collision in which he was not injured, the patient suddenly fell to the ground, and was brought to the hospital in a semicomatose condition, complaining of severe pain in the right side

* Read before the General Meeting of the Medical Society of the State of Pennsylvania, Philadelphia Session, October 13, 1926.

of the head. The pupils were somewhat irregular and sluggish, and some weakness existed in the external rectus of the right eye. The temperature was 100, pulse 60, respirations 24, and lungs and heart normal. Some stiffness of the neck existed at that time. Kernig's sign was present, and disorientation was evident. There was a trace of albumin in the urine, 2 per cent of sugar, but no acetone, diacetic acid, or casts. The blood sugar was 134; uric acid, 5.6; creatinin, 1.4; red blood count, 5,920,000; white, 14,500; hemoglobin, 92 per cent. The systolic blood pressure was 150; diastolic, 95.

At this point the question came up whether this man was not suffering from diabetic coma, but the absence of acetone or diacetic acid made this practically impossible. The spinal fluid showed a slight increase of pressure; Wassermann negative. Smears by culture showed pneumococcus of type 2. Several examinations were made of the spinal fluid, and the second examination was done by Dr. John Kolmer, who verified the first statement. The eyes showed the right palpebral fissure somewhat narrower than the left; slight ptosis; no diplopia. Cheyne-Stokes breathing was present.

Pneumococcus serum was not used because we were dealing with type 2, but urotropin was given in large doses. The recovery from proved pneumococcic meningitis of type 2 is worthy of being placed on record. It is a comparatively rare condition, and cases proved by serology are extremely few.

CORONARY THROMBOSIS PRESENTATION OF PATHOLOGIC FINDINGS

JOSEPH B. WOLFFE, M.D.
PHILADELPHIA, PA.

A man, age 48, painter by occupation, was admitted to the Mt. Sinai Hospital, on Dr. Shmookler's service, December 19, 1925, complaining of severe pain over the precordium, radiating to the shoulders and down both arms.

The patient gave a history of having been apparently well until six hours previously, at which time, while lifting a heavy weight, he was seized by an extremely severe pain in the precordium, which was accompanied by a fear of impending death. The patient stated upon further questioning that for the past six to eight months he would develop a peculiar sense of constriction in the same region upon exertion. Aside from these facts the history was negative.

Physical examination revealed the patient sitting upright in bed, somewhat dyspneic, and constantly moaning as if in great pain. The heart was enlarged in its transverse diameter,

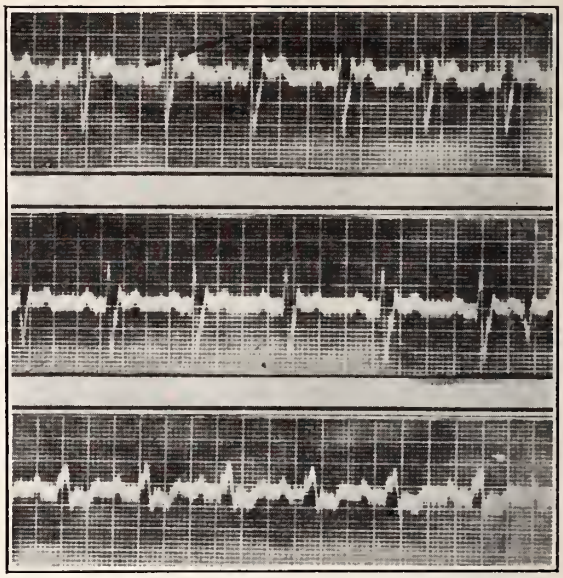


Fig. 1. Electrocardiogram (Leads I, II and III) showing impaired conductivity over the left bundle branch and myocardial degeneration.

the left border being 10 cm. to the left of the midsternal line in the fifth interspace. The right border was 4½ cm. to the right of the midsternal line in the fourth interspace. The heart sounds were weak and muffled. No murmurs were audible. The lungs were clear, neither the liver nor spleen was palpable, and there was no edema of the legs. The blood pressure was systolic 90 and diastolic 60. Upon admission, the temperature was 100°, the pulse rate 110, and the respirations 25.

The laboratory findings were as follows: Urine: Specific gravity, 10.30; acid in reaction, with a slight trace of albumin. Leukocyte count,

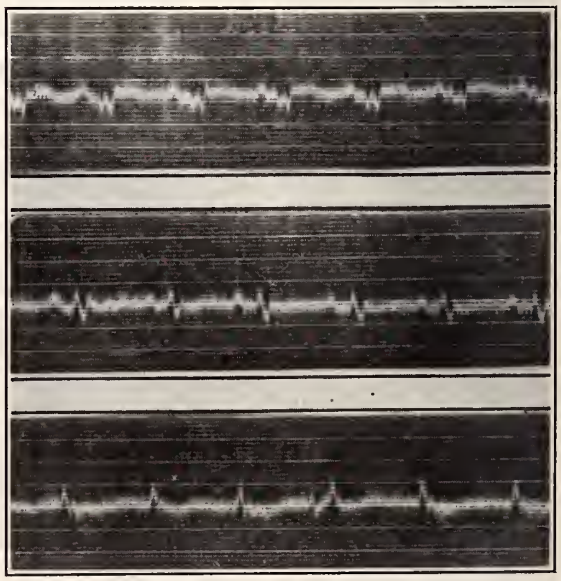


Fig. 2. Electrocardiogram (Leads I, II and III) showing distinct evidence of coronary disease, advanced myocardial degeneration, and impaired conductivity over the left bundle branch.

15,800; polymorphoneuclears 89 per cent. Blood chemistry: Urea nitrogen 25, sugar 15 mg., nonprotein nitrogen 60 mg. per hundred c.c. of blood. Electrocardiographic study: Inversion of T wave in Lead III, impaired conductivity over the left bundle branch, myocardial degeneration (see figure 1).

On the second day of the patient's stay in the hospital, a pericardial friction rub was heard. He began to show evidence of symptomatic improvement. The temperature dropped to normal on the fourth day, and the pain gradually subsided. The patient was discharged from the hospital January 11, 1926, at which time, although still very weak, he was nevertheless able to get about. His improvement continued, and he decided to

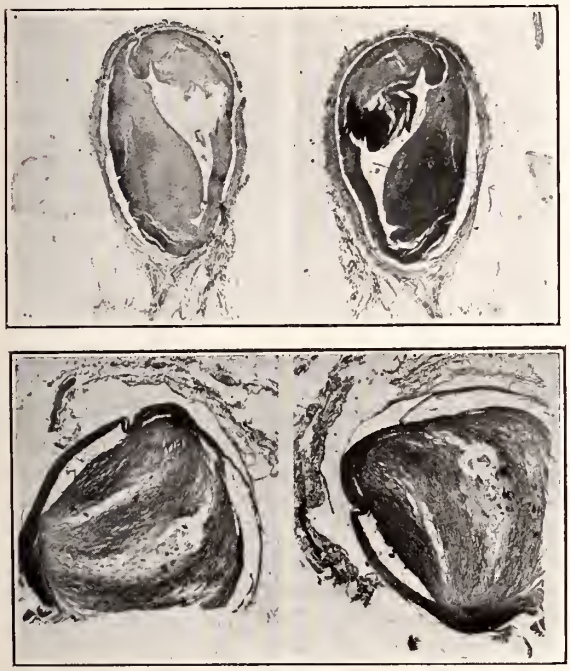


Fig. 3. Several sections of the left coronary, showing different degrees of coronary occlusion.

resume his previous occupation without consulting his family physician. His activities were still limited on account of minor attacks of precordial pain.

On April 22, 1926, thirteen weeks after his initial attack, he was seized with severe upper-abdominal pain. This was somewhat relieved by an enema, but it left him exhausted for several days. Six days later, the patient suffered a similar attack, but this was much more severe. The pain in the upper abdomen was continuous, and he also developed cyanosis, marked dyspnea, and swelling of the feet. The heart sounds were very weak and at times almost inaudible. To confuse this picture, the abdominal rigidity and tenderness was so great that some of the examining physicians were of the opinion that the patient was suffering from an abdominal catastrophe, either a mesenteric thrombosis or the rupture of some viscus. After a few days, he again appeared to show signs of improvement.

The electrocardiogram at this time showed distinct evidence of coronary disease and myocardial degeneration. Figure 2 reveals the inversion of the T wave in Leads II and III, impairment of conductivity over the left bundle branch, and increase in the width of the Q-R-S complex. The amplitude of the latter is seen to be considerably less than that in the tracing taken upon the patient's first admission to the hospital.

As the patient showed signs of gradual improvement, he was permitted to get out of bed for brief periods of time. On June 24, 1926, while bending down to the floor, he suddenly expired.

Autopsy Findings

Evidence of a terminal pericarditis was found. About 3 cm. above the apex on the anterior surface of the heart was a dense pericardial adhesion apparently well organized, and 4 cm. above this was a second adhesion, not so well organized and apparently more recent. The former covered an area of the left ventricle about the size of a half-dollar. This part of the left ventricle wall was very much thinned out, being only 3/16 inch in thickness as compared to the right ventricle, which was ½ inch in thickness. This area was very soft, and on slight magnification appeared to be practically devoid of muscle tissue and gave the appearance of a myomalacia cordis.

The aorta showed scattered atheromatous patches. The aortic cusps were thickened, as was also the mitral valve. Injection of the coronary vessels disclosed definite evidence of coronary occlusion. While the proximal sections of the affected vessel showed marked coronary obstruction, the distal portions revealed almost complete occlusion.

The microscopic sections taken from the left ventricle, which was supplied by the occluded coronary, showed the muscular fibers to be few in number and isolated in little islands, between which was a hyaline material containing a few oval nuclei which stained palely. A few strands of fibrous tissue were seen scattered throughout. It was apparent that the muscle fibers were replaced by this hyaline material and fibrous tissue. At one place a small area was seen, made up of small round cells, endothelioid cells, and fibroblasts indicative of an area of infarction. Small capillary blood vessels were also seen, but those present in the section were empty.

Pathologic diagnosis: Coronary thrombosis,



Fig. 4. Longitudinal section of the degenerated portion of the left ventricle, showing replacement of muscle fibers by hyaline material and area of infarction.

myomalacia cordis of the left ventricle, myocardial degeneration, adhesive pericarditis.

COMMENT

The coronary circulation is an extremely rich one, the anastomosing vessels being very numerous. This can be seen in figure 8, which shows ligations that were made at ten points along the course of the coronary arteries and its branches. Mercury was then injected in one branch which was not ligated. All the vessels were seen to be filled out with mercury.

It is conceivable, therefore, that as a result of the rich interlacing network which these vessels form, a thrombus formation in one of the coronary vessels can be compensated by the establishment of collateral circulation, provided the thrombosed vessel is small and the heart is at physiologic rest. The extremely complicated nerve supply of the heart and its communication with other nerves and ganglia may explain the production of abdominal pain and rigidity in cases of coronary disease. The electrocardiogram was a valuable aid in the diagnosis, as well as the prognosis of this case.

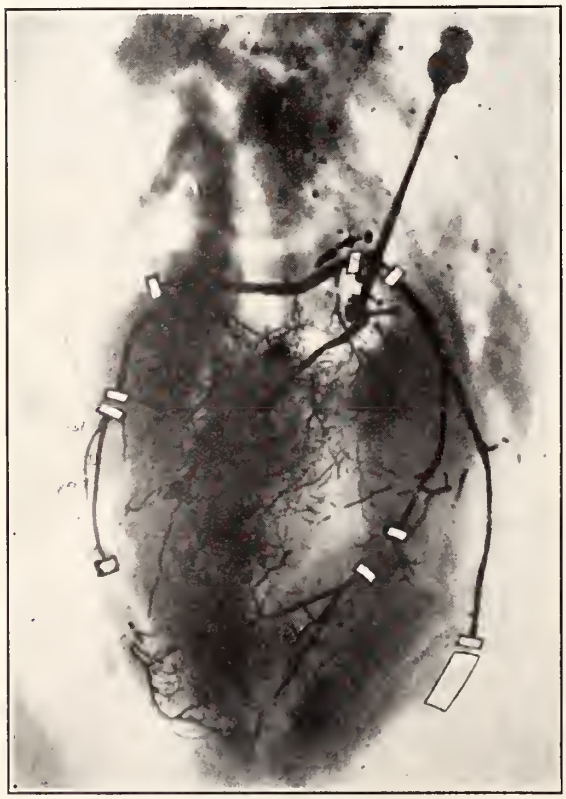


Fig. 5. Ligations were made at ten points along the course of the coronary artery and its branches. Mercury was then injected through one branch that was not ligated. All the vessels are seen to be filled out with mercury except those where the ligations were made proximal as well as distal.

MULTIPLE METASTATIC TUMORS OF THE BRAIN FROM A PRIMARY MELANOSARCOMA OF THE NECK

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This is the story of a man, aged 28 years, who was admitted to Mercy Hospital because of a progressive paralysis of the left side of the body. The initial symptom was a Jacksonian convulsion involving the left side of the face and neck, which occurred at his father's funeral three weeks prior to the patient's admission. There were similar attacks occurring daily for five days, when the left arm became weak. Six days later a paralysis appeared in the left leg. The symptoms were all rapidly progressive, except the focal convulsive seizures, which ceased after five days. There had been no symptoms of increased intracranial pressure, and no clouding of consciousness.

Examination showed a left-sided hemiplegia with very little sensory involvement. The left optic disc was decidedly pale, but there was no evidence of a papilledema. The pupils were normal.

An exhaustive laboratory study yielded only two positive findings: a distinctly yellow-colored spinal fluid that was otherwise negative, and an x-ray of the skull that showed a peculiar spot of lessened density of the inner table to the left of the midline and on either side of the coronal suture.

We believed that we were dealing with a cerebral vascular lesion because of the acute onset, the yellow spinal fluid, the rapid course, and the absence of signs suggesting increased intracranial pressure. A complete physical survey was carried out at this point by the medical consultants, but it failed to show any evidence of vascular disease. It was the consensus of opinion that syphilis was the underlying basis of the cerebral condition in spite of the negative serology and the clean family history. Everything pointed to its being a vascular lesion, and we could not conceive of any other satisfactory explanation of a cerebral hemorrhage in such a young individual. This view was supported by the optic atrophy in one eye and the area of bone

destruction in the skull, which the roentgenologist thought might be a gumma.

Iodids were given by mouth and intravenously for two days, when the patient became stuporous, a weakness of the right leg appeared, and there was some difficulty in swallowing. After four days the swallowing improved and the stupor disappeared, but in the meantime the paralysis in the right leg had become progressively worse. One week later the right arm became paralyzed, completing the quadriplegia. The patient again became stuporous, and for the first time there was a slight degree of papilledema.

At this point we began to wonder whether, after all, there might not be a rapidly growing cerebral tumor present. The history was reviewed with the wife again. During this conversation she casually remarked that three years previously a pigmented nevus had been removed from the patient's neck because it had been growing and was tender. The man died a bulbar death two hours after this conversation.

At autopsy, several darkly pigmented tumor masses were found scattered throughout each cerebral hemisphere. The largest was about four centimeters in diameter. Each tumor mass was cystic and contained a blood clot. One of the large hemorrhagic cysts in the right frontal lobe had communicated with the subarachnoid space, which accounted for the evidence of old blood in the spinal fluid. There was one small tumor mass in the right lung, but no metastasis elsewhere. Microscopic examination of the tumor masses showed it to be a typical melanosarcoma. No evidence of a recurrence was found in the site from which the pigmented nevus had been removed, but it was felt that this was the primary growth from which metastasis occurred to the brain and lung three years later.

OSTEOMYELITIS FOLLOWED BY CALCAREOUS RESORPTION AND DEPOSIT IN THE SOFT TISSUES*

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A 65-year-old white man had his hand amputated for a suppurative osteomyelitis of the carpus. The x-ray had shown a rarefaction of the phalanges which were not included in the osteomyelitis. This was noted as part of the formal x-ray report, but not ascribed to a general bone resorption. It was only the discovery histologically of lime salts in the skin of the amputated hand which raised the suspicion that the osseous rarefaction might be the expression of the rare pathologic state known as calcareous metastasis.

Where seen, calcareous metastasis is usually an accompaniment (and it may be but local) of bone destruction. Lime salts become resorbed from the skeleton in general, and deposited in the lungs, kidneys, and stomach. In order to determine whether the resorption was general in our patient, Dr. Pancoast's department x-rayed most of the skeleton (this was more than a year after the attack of osteomyelitis), and reported rarefaction of the phalanges and tibias definitely over and above what might be explained on the basis of the patient's age, but could find no signs of deposits in the lungs or kidneys. We feel justified in assuming that this old man had calcareous metastasis at the time of his osteomyelitis, but that it had been largely corrected during the year following.

The point to this communication is that the x-ray nowadays is in the position to advise us *how often* calcareous metastasis occurs in connection with osteomyelitis, and whether from this there is increased danger of fractures of even nonsuppurative bones. This is something that it was impossible to do in pre-x-ray days. All of the reported cases were discovered at necropsy, and the x-ray has now an opportunity to extract clinical value from the complex. If x-ray workers do discover cases of calcareous metastasis, we should be indebted to them for an examination of the skin (biopsy and otherwise) for calcification, in order to determine whether our case was an exception, or whether in calcareous metastasis there is a fourth acid-excreting organ, the skin, to be added to the lungs, kidneys, and stomach. Furthermore, the skin in these cases would be a welcome tool to those investigating the important subject of calcium metabolism.

*Reported in detail, *Archives of Dermatology and Syphilology*, November, 1926.

PRURITUS AS A SYMPTOM OF VAGOTONIA

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PHILADELPHIA, PA.

The aphorism, "one cannot understand the patient's skin without understanding the patient himself," emphasizes the fallacy of prescribing only local treatment for all skin diseases. In an etiologic classification of pruritus, indeed of eczema and urticaria, a group should be added in which the pathogenesis apparently concerns the vegetative nervous system, the patient presenting vagotonic manifestations as involved in the hypothesis of Eppinger and Hess.[1] The following brief case history exemplifies this:

A married woman, aged 37, complained grievously of generalized pruritus of six months' duration, and

withal many of the symptoms implied by the term neurasthenia; a history of hay fever, perennial until three years prior; frequent attacks of sneezing; below weight; easily fatigued; badly constipated. She was of the visceroptotic type, with hypotension and a pulse rate of sixty.

There was a marked dermographism, and the skin of the hands and feet was bluish-red, moist, and cold to the touch. The cutaneous examination was otherwise negative. There was a moderate anemia and an eosinophile count of four per cent. The blood chemistry was normal. Examination of the feces for parasites was negative. The urine examination and blood Wassermann test were negative. Cutaneous tests performed with pollen and food extracts were essentially negative. Physical examination was otherwise negative, except for apical impairment with râles, which, together with the history, suggested incipient tuberculosis, although there was no elevation of temperature, and a roentgenogram of the chest was negative.

The foregoing vagotonic symptoms suggested adrenalin, atropin, and calcium in the treatment of the pruritus. Adrenalin and atropin were administered orally, ten minims of the former, and gr. 1/150 of the latter, t. i. d. Calcium was administered intravenously, 5 c.c. of a 10-per-cent solution twice weekly. Following this therapy, there was a striking disappearance of the pruritus.

Time and space prevent citation of other similar histories of patients with eczema or urticaria.

It is interesting to note the resemblance between the symptomatology of what Eppinger and Hess term "vagotonia" and the clinical picture of allergy, and too, the state that is implied by the unfortunate term "eosinophil diathesis," under which heading are classified those persons prone to bronchial asthma, mucous colitis, urticaria, and allied conditions that have as a frequent accompaniment an eosinophilia. Unfortunately we have no clear concept of the pathogenesis of these morbid states.[2] There is apparently a relation between the problems of anaphylaxis, and eosinophilia and that of bronchial asthma.

Whether or not one accepts the hypothesis of Eppinger and Hess, patients with pruritus, eczema, or urticaria who present symptoms of vagotonia are benefited in my experience by the treatment with adrenalin, atropin, and more particularly calcium. I do not believe a study of such patients is complete until these symptoms are searched for and a blood smear for eosinophilia is made. The conventional cutaneous tests in these patients, in my experience, have been disappointing.

The rôle of the vegetative nervous system, in the pathogenesis of pruritus, eczema, and urticaria, and the therapeutic value of drugs that act as sympathetic-nerve stimulants may be partly explained by the following considerations.[3] Pottenger aptly points out that "one must not forget the importance of the sympathetic nerves in their relationship to all dermal and subdermal structures. So far as we know, there is no physiologic connection between these structures and the parasympathetic system; therefore, eczema and other affections of the skin accompanied by itching should be considered in their relationship to the sympathetic neurocellular mechanism." Viewed in the foregoing way, the pathogenesis of eczema, and perhaps too of pruritus, concerns a disturbance of sympathetic and parasympathetic action which intimately concerns the action of calcium-ions on the one hand, and sodium and potassium-ions on the other hand. Indeed, this view is the physiologic basis of the symptomatology of many diseases—the consideration of the rôle that the vegetative nervous system plays in the phenomena of congestion and of inflammation; the peculiar relationship between calcium and potassium salts which has been well shown in the epochal work of Sidney Ringer in his studies on the action of these salts upon an isolated frog's heart. As a result of such studies and subsequent work by others, it has been shown that a proportion between the calcium and potassium-ions in the cells determines normal action in the heart by establishing an equilibrium between the action of the sympathetic and the vagus nerves. If the ratio of calcium to potassium is increased, a sympathetic action of the heart results; whereas, if the ratio of potassium to calcium is increased, a vagus effect on the heart results. In the foregoing regard, the action of sodium harmonizes with that of potassium. This principle is operative in the governing of other tissues—iris, vessels, bronchi, stomach, intestines, bladder, uterus.

These observations established the interdependence of the sympathetic nerves and calcium in the cells and the parasympathetic nerves and potassium-ions. It has been shown that calcium depresses the neuromuscular connections in striated muscle, like curara, and that the removal of calcium is said to increase the irritability of the terminations of the autonomic nerves in mammals. Moreover, calcium has been shown to have a desensitizing effect in the cell and to decrease its permeability. Calcium has for a long time been used somewhat empirically in the treatment of eczema and for the relief of itching.

Our studies[3] of the inorganic chemistry of the skin, which tend to show an inverse relation between the calcium and potassium content and cutaneous irritability, are consistent with the observations of others, which show that there must be maintained between the inorganic constituents of the surrounding fluid an equilibrium for the normal functioning of the cell, as is evidenced in the balanced solution of Ringer. It appears, from observations of others relative to the rôle

that calcium, magnesium, sodium, and potassium play in regulating cell activity, that the proportion of these bases to one another establishes an equilibrium of normal cutaneous function. It appears that the maintenance of this equilibrium is intimately concerned with the vegetative nervous system, and in relation to the latter the endocrine glands, and can apparently be influenced through altered metabolism of divers origins.

REFERENCES

1. EPPINGER, H., and HESS, L.: *A Clinical Study in Vegetative Neurology.* Translation by Kraus M., and Jelliffe, S. E. The Nervous and Mental Disease Publishing Company, New York, 1915.
2. It is interesting to note the varying viewpoints of different writers toward phases of this morbid state. For example, Janet, in his volume on *Psychological Healing* (Vol. II, p. 1051-1057. Macmillan Co., 1925) discusses mucous colitis, asthma, dermographism, rhinorrhea, localized edema, etc., on physiologic grounds, as a circulatory disturbance—a vasomotor neurosis. Duke's viewpoint, on the other hand, is essentially allergic (DUKE, W. W.: *Asthma, Hay Fever, Urticaria, and Allied Manifestations of Allergy.* Mosby Co., 1925), whereas Pulay's viewpoint is essentially biochemical (PULAY, *Eczema and Urticaria*).
3. For a more detailed discussion, see the papers: KLAUDER, J. V., and BROWN, H.: Experimental Studies in Eczema. (1) "Study of the Sensibility of the Skin of Rabbits to Chemical Irritants Under Experimentally Induced Conditions." *Arch. Dermat. and Syph.*, 2, 283-301, 1925. (2) "Experimental Studies in Eczema. A Correlation of the Chemistry with the Irritability of the Skin of Animals Under Normal and Under Experimentally Induced Conditions." *Arch. Dermat. and Syph.*

DIVERTICULITIS SIMULATING CARCINOMA

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W. R., aged 71, male, married, white, retired business man, had a pulse rate of 110, respiration 16, temperature 100°, and blood pressure 128/100.

For the past eighteen months, the patient had had frequent involuntary movements of the bowels, at times passing a good deal of blood mixed with the stools. He had consulted several physicians, who had persisted in giving him bismuth and astringents. When first seen, he had a profuse diarrhea, involuntary movements, incontinence of urine, and a greatly distended abdomen; he was toxic, extremely nervous, and mentally depressed, vomiting large amounts of foul, partly digested material, and a large mass, irregular in outline, apparently not attached to the surrounding tissues, was easily felt in the upper left quadrant of the abdomen. The mass persisted after high irrigations and laxatives. At times the stool contained blood and tissue, which proved to be necrotic tissue from the colon and sigmoid.

Urinalysis showed a high specific gravity, a few granular and hyaline casts, an occasional red blood corpuscle, and a few pus cells. The output was decreased. The blood count showed 3,200,000 red blood corpuscles, 8,000 to 10,000 white blood corpuscles, and 70 per cent of hemoglobin. The differential count was of no moment. The blood and spinal-fluid Wassermann tests were negative. The reflexes were all lessened, but otherwise normal. There was an Argyll Robertson pupil; no sensory changes.

Because of his age, emaciation, distention of the abdomen, toxic condition, blood in the stool, with presence of a mass, carcinoma was thought to be the most likely diagnosis.

After repeated attempts with barium enemas, a picture was obtained which showed numerous diverticuli of the sigmoid. The patient improved rapidly when treatment was instituted to relieve this condition.

The undoubted cause of the diverticulitis in this case was cerebral arteriosclerosis, as manifested clinically. The lack of any evidence of syphilis, absence of sensory changes, and incontinence of urine, with no other determined cause, further bears out this belief. The cerebral arteriosclerosis affected this man in a rather peculiar way. He did not know when his bowels acted; yet his sensory function was not impaired. The whole lower bowel had carried such quantities of material for long periods that pressure no doubt caused the diverticuli, the diarrhea simply being softened material passing around the enormous masses of fecal material.

The bowel was distended to an enormous size, and even after it was well emptied, the distention continued. The mental condition has cleared to a great extent, probably because there is less toxemia. This patient has been under observation for two years, and has improved to a marked degree, except that cerebral changes have increased. The supposed cancer mass has disappeared, and has never returned.

GONORRHEAL INFECTION WITH RARE MANIFESTATIONS

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PITTSBURGH, PA.

This patient, aged 34, about three weeks before admission to the hospital, had intercourse, during which a condom was used, and several hours afterwards applied a mercury ointment in the usual way. Three days following exposure, he noticed what he said was a pimple on the left side of the shaft of the penis, about 1½ inches from the base. From this time on, for a period of about ten days, he applied various kinds of home antiseptics, but the lesion did not heal.

When first seen, about two weeks after exposure, the patient had a sore about ½ inch in diameter, with a grey, moist, necrotic center, and slightly raised and cut-under edges. The lesion was slightly indurated and painful on pressure, with no abnormal enlargement of the regional glands. He had no rash, sore throat, or fever, and no history of specific urethritis or syphilis.

On the chance that the lesion might be a masked luetic chancre, it was kept clean with normal salt solution, and later a dark-field examination for spirochetes was done. None were found, and the Wassermann was negative. A two-per-cent solution of mercurochrome was applied, but the lesion began to spread and became more painful. After a few days the edges had been well cut under and then sloughed off, with the ulcer extending around the penis. The base was rather fiery red, raw tissue, with a slight thin grayish exudate, and the sore showed little attempt at healing. The patient was advised to come to the hospital for a complete removal by cautery.

On admission, under gas anesthesia the "wound was dissected free of all necrotic tissue and all overlying edges. Actual cautery was then applied, and the wound thoroughly cauterized. Vaseline dressing was applied." At this time the lesion was considered a phagadenic chancroid. The operative field remained quiet for about three days and then sloughed, with the ulceration starting to extend farther around the penis. Various antiseptics, such as mercurochrome, peroxid, calomel ointment, bichlorid of mercury, and crystal violet, were applied, but erosion continued. Six days after the first cauterization, the field was again cauterized, and a piece of tissue sent to the laboratory for examination for Donovan bodies, thinking it might be an inguinal granuloma, but none were found. The patient, however, was given tartar emetic (1 c.c. of a one-per-cent solution) several times by vein, with no result. During this time, repeated Wassermanns were negative, and there were no constitutional signs of lues. Finally, some swabs of the wound area were made, and cultures showed a pure growth of gonococcus, which was further verified by sugar fermentations. A continuous wet dressing of 10-per-cent argyrol was applied, and in a few days the lesion showed marked improvement and went on to complete healing in about eighteen days.

Two weeks after the second cauterization, the patient started to complain of some pain in the region of his left wrist, which in a few days became swollen, red, and tender, although the joint itself did not seem to be involved. At this time he also started to run a little fever, swinging between 99° and 101°. Repeated blood cultures were negative, but there was a 4+ gonococcus complement fixation. Wet dressings were applied and heat, with the forearm finally showing fluctuation on the anterior surface at about the upper part of the lower third. The part was incised, and a thick bloody pus was found, from which the gonococcus was isolated and identified. The majority of the tendon sheaths of the long flexors were destroyed, and the long flexor tendon of the thumb was eroded through. Drainage was instituted, and Dakin's solution used. His temperature came down to normal in about three days, but the patient started to feel chilly and had some sweating, with a persistent diarrhea. Blood cultures and stool cultures did not show the gonococcus at this time.

Ten days after opening his left arm, the patient complained of pain in the region of the right wrist, and started to run a mild fever, as before. Four days afterwards, fluctuation was detected, and an opening made. The same condition as in the left arm was found, but damage was not as extensive. Following institution of drainage, the temperature came down in about two days.

From the onset of involvement of the left arm, the patient was given one hundred million killed gonococci subcutaneously every fifth day; sodium iodid, gr. XXX, by vein, every other day for four doses; iron, arsenic, mercury, and strychnin in full doses by mouth; with forced feeding and large amounts of fluids, and the daily application of the Alpine lamp to his whole body. His diarrhea, incidentally, seemed to have nothing to do with the mercury which he received, as it ran a course independent of the drug.

Four weeks following the opening of the right forearm, his wounds were all healed, and the patient left the hospital after a confinement of 85 days, his general condition being good, but with some crippling of the left hand and stiffness of the right wrist.

DIPHTHERIA CONTROL*†

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State-wide campaigning by the State Health Department against diphtheria continues with gratifying results. Since the intensive effort began, satisfactory coöperation with organized health forces, service clubs, and medical societies has been accomplished. Furthermore, members of the medical profession, as individuals, have more than given their moral support to the undertaking. With characteristic altruistic zeal, hundreds of physicians have given of their time and energy in free service to their communities. Without this help on the part of the doctors, our work would have been in vain.

It seems to us that the goal we have set—the elimination of diphtheria as an epidemic disease in Pennsylvania by 1930—is within sight. Diph-

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†From the Bureau of Child Health, Pennsylvania Department of Health.

theria, like hog cholera, which has been entirely eliminated by the Agricultural Department's efforts, lends itself readily to control by health authorities, provided the public can be taught to appreciate the preventive efforts of physicians and health authorities.

The Department has had in mind at all times the three chief objectives: (1) Strict observation of quarantine by both patients and contacts. (2) Larger and earlier doses of antitoxin as a curative agent. (3) Lasting immunization by toxin-antitoxin.

There is no doubt in the minds of those familiar with statistical reports that the first objective has slowly but surely rooted itself in the minds of the lay public, and everywhere there is every indication that the people, as a whole, are willingly submitting to quarantine and demanding the same submission on the part of their neighbors. Neither is there any doubt in the minds of those familiar with the issuing of antitoxin (and a study of reports from the 739 antitoxin stations throughout the State verifies the opinion) that the profession, as a whole, is now following the lead of the teachers in our large medical centers, and is using much larger initial doses of antitoxin at an earlier period in the course of the disease, as a curative agent; while lasting immunization by toxin-antitoxin is rapidly being established as a universal procedure, both in a public-health way and in private practice by a large portion of the profession.

In the beginning, it was difficult to secure the helpful consent of parents for the Schick-testing of large groups of children, and even more difficult to secure their consent to immunization. This is still made difficult in some communities because of the necessity of three repeated doses. It will be a happy day and a great impetus to our work, when we can be reasonably sure of lasting immunization by a single dose of toxin-antitoxin.

During this period of study and effort, there have been immunized by free toxin-antitoxin issued by the State Department of Health, more than 300,000 children in Pennsylvania, outside of the cities of Philadelphia and Pittsburgh. Fully 50 per cent of these children were in purely rural districts.

While the work was more or less under the supervision of the Bureau handling diphtheria control, the immunizations were almost entirely done by volunteer physicians and nurses eager to help in this, to our mind, most important public-health service. In one county alone, one of the three physicians of the county has immunized 80 per cent of the children under twelve years of age in the whole county.

In addition to the free toxin-antitoxin issued by our Department, it may be gathered from reports by commercial houses and laboratories on their increased sales that an equal number of children have been immunized in private practice. It is my belief that a large portion of the profession, in both the rural and urban communities, are rapidly establishing lasting immunization by toxin-antitoxin against diphtheria as a routine procedure in their private practice.

The year this work was undertaken, there were 20,784 cases of diphtheria in the State for that year, and the average number of cases for a fifteen-year period preceding that was in the neighborhood of 14,000. This figure has steadily and gradually been reduced by about 2,000 cases per year, until the year 1925 found us with but 10,179 cases of diphtheria in the State. To date this year, 1926, there have been reported to the Department of Health 5,231 cases.

The year this work was undertaken, there were over 2,000 deaths from diphtheria in the State, the death rate per 100,000 population being 22.5. In 1924 this death rate was reduced to 11.7, and in 1925 it was 10.5, there being but 978 deaths from diphtheria last year. To date this year, there have been but 505 deaths from diphtheria reported. These results are the more gratifying, when we consider that the estimated population of the State in 1925 was nearly a million more than in 1920.

We appeal to you, as members of the most altruistic of all professions, and as believers in the modern ideas of preventive medicine, to help us reach the goal we have set for 1930.

RENAL HEMATURIA*

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Hematuria, like pyuria, is in most cases an outward expression of organic disease somewhere in the urogenital tract. Unless a definite contraindication exists, cystoscopic examination during the progress of the bleeding is the only rational method to discover its source and cause. To allow these cases to go unstudied until another attack ensues may delay a correct diagnosis until a time when surgical intervention is more hazardous or altogether futile.

Pelouze[1] tabulates twenty-four cases of surgical hematuria where the average time elapsing between the first appearance of blood in the urine and a request for cystoscopy was over two years. A timely operation might have pre-

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vented prolonged morbidity and even death in some of his cases.

An analysis of 821 cases of hematuria by MacKenzie[2] shows that seventy per cent were due to conditions within the urinary tract requiring surgical intervention. Most of the remaining thirty per cent required thorough investigation to locate the source of the bleeding so that proper nonoperative treatment might be directed to the seat of trouble. These figures compiled by an able and trustworthy investigator show the fallacy of temporizing on the assumption that we are dealing with so-called essential or idiopathic hematuria.

Many clinicians assert that, almost without exception, the underlying cause of idiopathic hematuria is nephritis.

Israel, as quoted by Kelly and Burnam,[3] makes the following points: "First, a nephritis can be one-sided. Second, nephritis of one side can give colic and hemorrhage. Third, a double-sided nephritis can give colic in one side only. Fourth, severe nephritis can be present without either casts or albumin occurring in the urine."

In the light of our present knowledge, "essential" hematuria is due to injury to the kidney by blood-borne infective material from distant foci. Hunner[4] reports eighteen cases of so-called essential hematuria due to ureteral stricture which causes injury to the kidney substance by back pressure. He concludes by saying: "Our cases are too few in number to warrant dogmatic conclusions; but the results suggest that ureteral dilatation and care of focal infections will be the future treatment for most of the so-called essential hematurias."

When we add to the above the possibility of a renal calculus transparent to the x-ray, giving rise to obscure bleeding without colic, we can find an organic basis for almost every case of hematuria. The term "essential" hematuria should designate the physician's inability to demonstrate the cause of the bleeding.

Hematuria dependent on diseases other than those of the urogenital tract is rare, yet sufficiently important to deserve mention. Hematuria was the first symptom in four out of twenty cases of hemophilia observed by Locke and Minot.[5] Purpura hemorrhagica, the primary anemias, and various drugs may cause hematuria.

The following case is illustrative of so-called essential or symptomless hematuria:

F. P., aged 20, a mother of one child eighteen months old, entered the wards of the Mt. Sinai Hospital on November 8, 1923, for the treatment of hematuria. The patient had had the usual diseases of childhood and repeated attacks of sore throat, the last one occurring a month prior to the day of her admission to the hospital. Recovery was apparently complete. Three weeks later she noticed hematuria, and began to experience urinary frequency and slight lower-abdominal pain.

Examination revealed a well-nourished woman whose blood pressure, temperature, and pulse were normal. The tonsils were buried and distinctly diseased. The chest, abdomen, and pelvis were negative. The kidneys were neither palpable nor tender. X-ray study was negative. The urine showed blood macroscopically. There were no casts. The ratio between the red and white cells was that of blood. Blood chemistry indicated no retention. The coagulability of the blood was good, and the count normal. Cystoscopy revealed a normal bladder. Urine obtained from the left kidney by ureteral catheterization showed blood macroscopically; that obtained from the right kidney revealed a few red cells and some epithelial cells. Tubercle bacilli were not found either on the slide or by guinea-pig inoculation.

The urine from the right kidney was sterile; that of the left kidney gave a luxuriant growth of streptococci. The exudate expressed from the tonsillar crypts also showed streptococci. This led us to inoculate a rabbit with a saline suspension of this exudate with a view of proving the pathogenicity and elective localization of the tonsillar flora. Necropsy, a week later, showed no pathology in the organs or joints. Kidney cultures were sterile.

In spite of our failure to prove experimentally relationship between the infected tonsils and the hematuria, we were inclined, from clinical observation, to believe in its existence. The inoculated rabbit may have had a resistance far above the average. The experiment should have been carried out on a larger scale. The infected tonsils were removed and the patient made an uneventful recovery. She has not had a recurrence since then.

Hematuria in Renal Calculus

The symptomatic importance of hematuria in renal calculus is stressed by Nichols,[6] who, in a study of 164 cases, found hematuria either alone or as an accompaniment of other symptoms in forty-four per cent. In MacKenzie's[2] series of 821 cases of hematuria, renal and ureteral calculi were the causative factors in eighteen per cent. The two cases cited below are examples of the bleeding caused by calculi.

Mrs. E. S., aged 35, a mother of two children twelve and six years old respectively, entered the hospital on November 24, 1925, for the relief of right lower abdominal pain and pelvic discomfort incident to procidentia. She had had two abdominal operations. Prior to the second laparotomy four years before, she had noticed hematuria for several days.

Examination revealed marked pyuria, a tender mass in the right flank that did not move with respiration, and a third-degree prolapse of the uterus. Further study showed two large stones in the right kidney pelvis. There was no elimination of indigocarmin on the affected side in thirty minutes. The dye elimination by the left kidney was normal. Blood chemistry showed no retention.

On December 1, 1925, the affected kidney and part of the ureter were removed. The kidney was a mere shell that contained about four ounces of pus and the two stones noted by the radiologist. Fifteen days thereafter the procidentia was corrected by an interposition operation.

Had the surgeon who performed the second operation properly interpreted the significance of the single attack of hematuria, this woman would have been spared prolonged morbidity and the loss of her right kidney.

Another case, interesting because of the very misleading history, came under my observation recently:

Mrs. A. P., aged 28, para II, had missed two periods, and began to bleed rather profusely on August 4, 1925. The physician in charge failed to find organized tissue among the many clots she had passed. On August 8, when the uterine bleeding had almost ceased, she began to complain of severe pain in the left lower abdomen. The pain was not accompanied by irritability of the bladder. The woman appeared pale. Her pulse was of fair volume but rather rapid, and her temperature was somewhat subnormal. There was considerable tenderness but no rigidity in the left lower quadrant. The uterus was enlarged and soft. The external os was patent because of a bilateral laceration. The internal os, however, was tightly contracted. The adnexa were neither palpable nor tender. Moving the uterus from side to side caused no undue sensitiveness. There was a moderate amount of uterine bleeding. The possibility of a ruptured ectopic gestation was apparent. Blood examination showed nothing abnormal. Catheter specimens of urine appeared bloody. Cystoscopy revealed blood-tinged urine spurting from the left ureteral orifice. A No. 5 ureteral catheter met with an obstruction 10 cm. above the ureteral mouth. X-ray study failed to locate a stone.

We were at a loss to know whether we were dealing with an inflammatory stricture of the left lower ureter or an impacted ureteral stone not opaque to the x-rays. Repeated instillation of sterile olive oil by means of a ureteral catheter finally dislodged a small, reddish-brown stone which was shortly found in the voided urine.

Uric-acid and urea stones are no denser than the surrounding tissue, and unless there is an admixture of calcium salts, they remain transparent to the x-rays.

The absence of bladder infection and the undisturbed ratio between the red and white cells found in the urine rendered improbable an inflammatory stricture as a cause of the hematuria.

A similar misleading history pointing to ectopic pregnancy recently lead to an unnecessary operation on the wife of a Philadelphia physician.

Hematuria associated with renal colic may be due to causes other than ureteral calculus, inasmuch as the passage of a blood clot may give rise to colic strongly suggestive of calculus.

Hematuria Due to Kidney Tumors

Hypernephromata are by far the most frequent tumors of the kidneys in adult life. In a study of ninety-two kidney tumors, Wilson[7] found seventy-one hypernephromata. Hematuria is the most frequent initial symptom in kidney tumors. It occurred in forty-six per cent of the seventy cases analyzed by Abraham Hyman.[8] It is the most valuable symptom from a diagnostic point of view, as it immediately directs the attention of the patient and the physician to the urinary tract. The physician who fails to trace the source of the bleeding during its progress by means of cystoscopic examination loses an opportunity to save the life of his patient, inasmuch as the bleeding is always intermittent, and metastasis may take place long before another opportunity is presented to determine its origin definitely.

Identification of the bleeding kidney should be followed by pyelography, which greatly aids in arriving at a correct diagnosis. Should the pyelogram suggest, even slightly, a kidney tumor, exploration of the affected organ should be undertaken without delay. The following case is illustrative:

Mrs. E. R., aged 52, had never been seriously ill. Several years previous she had had an attack of severe pain in the right flank strongly suggesting renal colic. Her present trouble began the morning of September 1, 1925, with severe pain in the lower abdomen and inability to urinate. When she did perform the act, she found the urine to be bloody.

Examination revealed a relaxed abdomen, and no palpable mass in either kidney region. Vaginal examination disclosed nothing abnormal. The catheterized urine was very bloody. Cystoscopy showed edema of the trigone and the left ureteral mouth. The right ureteral orifice appeared normal. Both kidney pelves were catheterized. The urine from the left kidney was distinctly bloody; that from the right appeared normal. A comparative functional test showed thirteen per cent elimination of phenolsulphonephthalein by the right kidney and nine per cent by the left kidney in twenty minutes. The urine obtained from the right kidney showed nothing abnormal; that from the left kidney showed many red cells, with a proportionate number of white blood corpuscles and very many renal cells. Pyelographic study revealed distortion and crowding upward of the kidney pelvis, presumably by a mass occupying the lower pole of the kidney.

Operation was performed within a few days, and a hypernephroma occupying the lower two thirds of the kidney was found. There was no evidence of metastasis anywhere.

This case shows the advantage of urologic examination during the progress of the bleeding. It also shows the unreliability of the dye test for renal function, as one third of the kidney substance on the left side eliminated almost as much of the dye as did the well kidney.

Hematuria in Renal Tuberculosis

Hematuria may appear very early in renal tuberculosis. It is not an infrequent accompaniment of other symptoms. Of one hundred cases studied by Kelly and Burnam,[3] twenty-five per cent complained of having passed blood. The following case is an example of this type of affection.

Mrs. M. S., aged 60, was admitted to the hospital on January 8, 1926, for the relief of hematuria and marked asthenia. Seven weeks prior to her admission she was seized with sudden pain in the right flank, associated with irritability of the bladder. A month later she developed marked hematuria. The loss of blood was considerable,

and the anemia rather marked. Careful study failed to reveal a focus of infection in the lungs. There was no palpable enlargement of either kidney. Cystoscopy revealed a rigid craterlike ureteral orifice on the right side. The mouth of the left ureter and the surrounding area appeared normal. The urine obtained from the right kidney was cloudy, and pus and tubercle bacilli were demonstrated microscopically. The left-kidney urine was negative. Indigocarmin was eliminated by both kidneys in five minutes. Pyelography showed dilatation of the kidney pelvis and major calices, especially the upper one.

On January 21, 1926, I removed an apparently healthy kidney. A longitudinal section of the kidney, however, revealed disseminated tuberculosis of the cortex with involvement of the mucous membrane of the upper calix and pelvis. The middle and lower calices appeared normal. The woman had a rather stormy convalescence due to pulmonary complications. The wound broke down and healed very slowly. When discharged three months later, she was free from symptoms and able to walk.

One would doubt the wisdom of operating on a woman of her age and physical condition, but when we remember that hematuria was severe and persistent, a nephrectomy was the only alternative to cowardly inaction.

Renal tuberculosis usually produces no urinary symptoms until the process breaks into the kidney pelvis, when symptoms of pyelitis ensue. If the condition remains untreated surgically, downward extension to the ureter and bladder takes place. The disease is then easily recognized by means of the cystoscope.

A persistent unilateral pyelitis giving rise to hematuria of an apparently causeless nature should be looked upon with grave suspicion and a thorough search for tubercle bacilli on the slide and through animal inoculation should be made.

From personal observation, the following conditions in the order of frequency produced rather severe renal hematuria: Kidney and ureteral calculus, 10; so-called essential hematuria, 6; renal tuberculosis, 4; pyelitis, 3; kidney tumors, 2; polycystic kidneys, 1.

Conclusions

1. If one is to determine the source of hematuria, a cystoscopic examination must be made during the progress of the bleeding.

2. Pyelography for the purpose of determining the cause of the hematuria should be deferred until the bleeding has ceased.

3. The term "essential" hematuria designates our inability to determine the cause of the bleeding. A careful search for distant foci of infection should be made in every case of renal hematuria.

4. Some cases of so-called essential hematuria are tuberculous in origin. Repeated search should be made for a primary focus in the lungs and for tubercle bacilli in the urine.

5. Hematuria in the course of a persistent unilateral pyelitis of an apparently causeless nature should be looked upon with grave suspicion. This condition is frequently tuberculous, and should be diagnosed before the ureter and bladder are involved.

6. A blood clot may give rise to renal colic strongly simulating ureteral calculus; one may thus be taken off his guard. Every case of hematuria requires a careful urologic study, including pyelography.

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ETIOLOGY, SYMPTOMS, AND DIAGNOSIS OF PYELITIS*

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Pyelitis is a purulent inflammation of the pelvis of the kidney which often extends to the parenchyma of the organ, when the condition is spoken of as pyelonephritis. In another class of cases, an inflammatory process in the kidney with suppuration may be followed by secondary inflammation of the pelvis of the kidney. In these instances, the bacteria are clearly brought to the kidney by the blood stream.

When the pelvis of the kidney becomes infected following cystitis, it is called ascending pyelitis, and when the suppurative process in such cases extends to the renal parenchyma, the term surgical kidney is applied to the combined lesions. It is to be recollected, therefore, that pyelitis and nephritis quite commonly coexist.

When the pelvic inflammation is of mild character, as often happens, the mucosa of the pelvis of the kidney is reddened, swollen, and more or less covered with mucopurulent secretion. In severer forms, ecchymoses into the mucosa and erosions are also seen. This pathologic variety is often occasioned by the presence of renal calculi or by infection with pyogenic organisms.

A false membrane may develop in the renal pelvis during the course of certain infectious fevers. In tuberculous pyelitis, there are commonly found small irregular ulcers in the mucous membrane with thin and slightly irregular edges. These are covered with mucopus. There is a strong tendency to chronicity in tuberculous pyelitis, in which case, caseous

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masses may be formed within the walls of the pelvis of the kidney.

Etiology

The above-described changes are caused by various types of microörganisms. Generally speaking, the bacteria most commonly concerned are streptococci, staphylococci, colon bacilli, and tubercle bacilli. Mixed infections may be met with in this disease. The origin of pyelitis may be the intestinal tract; e.g., when it is secondary to enteritis or appendicitis. Again, the condition may be due to metastasis in the course of a distant focus of infection, most often in the tonsils and teeth.

The predisposing causes are quite numerous, and among the more important are the following: "(a) Renal calculus. (b) Torsion of the ureter and hydronephrosis. (c) Direct extension of an inflammatory process from the ureter (ureteritis). (d) Dilated pelvis of the kidney, in which the urine may become decomposed. (e) Acute nephritis. (f) Renal tuberculosis. (g) Renal carcinoma. (h) Foreign bodies in the bladder, such as vesical calculi. (i) Such chemic irritants as turpentine, cantharides, cubeb, and copaiba contribute toward the development of pyelitis. (j) It has been known to follow infectious fevers, e. g., typhoid fever, scarlet fever, smallpox, diphtheria, typhus fever, etc. (k) Obstructive pyelitis may follow plugging of the ureters with a small calculus, and the constant irritation produced by the passing of large amounts of uric acid is also capable of exciting true pyelitis."[1]

Severe traumatism of the kidney may be followed by an obstructive pyelitis. The condition may occur during the course of certain nervous diseases, e. g., hemiplegia and paraplegia, when it may be secondary to cystitis, and it is met with in the puerperal state.

It is highly probable that the particular route by which the infection enters the kidney pelvis is frequently the blood stream (hematogenous). It has been claimed, however, that the bacteria from adjacent organs may be transported by the lymphatics to the pelvis of the kidney. In ascending pyelitis, they travel up through the ureters. In rare instances, pyelitis may result from invasion of the pelvis of the kidney by Tænia echinococcus, Filaria, and other parasites.

Age has little predisposing effect, although the condition is somewhat more common after the thirtieth year. On the other hand, Thompson[2] declares that it is twice as frequent in children under two years as it is after that age. In early life, it is usually due to the colon bacillus, and about three fourths of the cases have been noted in girls.

Symptomatology

The principal complaint varies with the stage of the disease and the intensity of the type of infection. When it supervenes in the course of the acute infections, it may not cause any inconvenience unless it be of severe grade. The onset is, as a rule, marked by a chill or chilly sensations lasting from a few minutes to a couple of hours, followed by a febrile movement of moderate degree.

The usual associated symptoms of fever, such as anorexia, headache, weakness, palpitation, and lassitude appear even in mild forms (catarrhal pyelitis). Pains in the region of the affected kidney and loins and some tenderness over the same areas are often noted. The urine is turbid, of acid reaction, and shows a trace of albumin, a few pus cells, a small amount of mucus and rarely some red blood corpuscles.

In severe cases, these symptoms are more intense, and the pains may be boring and tearing in character, resembling renal colic. In calculous pyelitis, attacks of true renal colic may occur, with the free flow of normal urine for a time, or until the augmenting pain over the infected kidney ends in relief by the expulsion of the stone and the passage of a purulent urine. In this variety the urine often shows blood, pus, and mucus to the naked eye. The urine in cystopyelitis is of alkaline reaction, as a rule. In these severe types a more or less decided albuminuria, according to the degree of pyuria, is present. There is an associated fever, often of the septic type, touching 102° or 103° Fahrenheit in the evenings, with insomnia, sweats, and emaciation. Paroxysms of chills followed by a steep temperature curve and terminating in deep remissions with sweats are observed. One meets with cases in which there is marked prostration, feebleness of the circulation, delirium, and stupor. It is to be recollected that many of the pyemic cases with scattered abscess formation tend toward chronicity, more especially those due to tuberculosis.

Diagnosis

The physical signs presented in pyelitis are few but sometimes quite important in diagnosis. In the numerous cases in which the perinephritic and nephritic structures are involved, palpation reveals a mass in the renal region, as well as tenderness on deep pressure with the finger tip. There is also slight rigidity of the muscles of the affected side over the loin and abdomen.

A cystoscopic examination is a valuable means of determining the condition of the bladder, and it may reveal suppuration there as the primary focus in cystopyelitis. Exploration of the blad-

der should be followed by catheterization of the ureters to determine from which kidney the pus flows, when the condition is unilateral. The urine from both ureters, however, should be carefully studied.

Laboratory means of diagnosis are an invaluable aid in pyelitis. True it is that little is to be learned from a knowledge of the twenty-four hour quantity, since the healthy kidney usually compensates for its fellow when one or the other is incapacitated by pyelitis or pyelonephritis. The most significant feature of the urine is the presence of pus. Less important, although commonly present, are shreds of mucus, leukocytes, blood cells, and bacteria. Albuminuria, as previously noted, is an early symptom. The amount of albumin varies with the severity of the type of infection. Chemically, the presence of mucin is one of the earliest and most common urinary findings in pyelitis, sometimes preceding the morphologic elements for several months—a fact emphasized by Dr. L. N. Boston. The phthalein output is diminished, often decidedly, on the side of pyelonephritic lesions.

Microscopic examination shows the presence of cylindric shreds of mucus covered with bacteria. Large hyalin and granular casts may also be seen when the larger renal tubules and calices of the kidneys become involved (pyelonephritis). A bacteriologic examination of the urine should not be overlooked. Tubercle bacilli and other bacteria, such as colon bacilli and pyogenic cocci and bacilli, are often to be found, more particularly in chronic forms of the disorder.

The diagnosis of pyelitis embraces the detection of the etiologic and pathologic variety if appropriate treatment is to be instituted. A careful history often aids in the discovery of the cause. In all suspects the urine must be carefully studied, chemically, microscopically, and bacteriologically.

The presence of pains in one or both renal regions, with local tenderness, fever, and pus in an acid urine are *prima facie* evidence of pyelitis, but do not alone indicate the special variety in question. Given the indications of a pyelitis, its calculous origin is made clear upon the passage of the characteristic uratic or oxalatic concretions, together with a history of attacks of renal colic. It is to be recollected that the urine from the affected kidney is sometimes prevented from flowing by the impaction of a stone in the ureter, while the urine is flowing from the other or vicariously acting kidney, until the stone has reached the bladder, when there is a sudden increase in the quantity and an equally sudden change in its character, owing to the return of the morphologic elements of the pyelitis (pus corpuscles, desquamated epithelium, crystals, and debris). Pyelographic studies are useful in their results in many cases, from the standpoint of both diagnosis and treatment. They show whether or not the calices and large tubules are involved.

Marked vesical irritability points to associated cystitis, but this tenesmus may also be observed in intense pyelitis with much pus and an acid urine. It follows that cystopyelitis can be distinguished from other varieties of pyelitis only by cystoscopic examination of the bladder and catheterization of the ureters.

Tuberculous pyelitis can readily be separated from calculous pyelitis and nontuberculous cystopyelitis by the finding of the tubercle bacilli in the urine. Flick and Walsh and others, however, found them present in cases of tuberculosis in which kidney lesions were wanting. It is sometimes necessary to inoculate a guinea pig with the infected urine taken from the ureters in order to make a certain diagnosis of this form of the disorder and to ascertain the affected side.

The cases of noncalculous pyelitis in which the pains are tearing and boring in character, coursing down the ureter, bear a close resemblance to nephritic colic or calculous pyelitis. The x-ray examination, however, usually detects any concretions present, but it is not to be forgotten that uratic stones may not be dense enough to be detected by this means.

I have under my care at present a woman, suffering from calculous pyelitis, in whose case an x-ray examination failed to show the presence of a concretion which was nevertheless passed with the urine after many attacks of renal colic. The pyelogram had shown nothing abnormal save only that the right kidney was found to be dislocated in the downward direction, but not mobile in any position assumed during the observation. I recall a case of calculous pyelitis which was mistaken for appendicitis and was about to be operated upon when the calculus escaped from the ureter, with complete relief, before the hour set for the operation.

Perhaps the differentiation of pyelitis from perinephritic abscess is one of the most puzzling diagnostic problems encountered. In the latter condition, it is possible to palpate a mass in the region of the kidney, leukocytosis is present early, and becomes decided. There is no pus in the urine, and bacteriologic study is negative in uncomplicated cases. Pyelitis and perinephritic abscess may coexist, however.

It will be seen from this brief discussion of pyelitis that it may at times be readily recognized, while in a considerable percentage of cases it offers the greatest difficulty, more particularly with respect to the differential diagnosis of the recognized varieties.

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Editorials

CHRISTMAS GREETINGS

The Journal extends to its readers wishes for a very merry Christmas.

The Yuletide season of peace on earth and good will toward men thrills us as does no other occasion in the year.

As it is more blessed to give than to receive, we are wont at this time of the year to give to our fullest extent to add to the happiness of others. Particularly toward the unfortunate.

No one knows better than the physician, through his intimate knowledge of the homes he visits, where Christmas cheer is needed and will be appreciated. He can direct those who are charitably disposed where their contributions, in whatever form, may be deservingly bestowed, and will make many a fireside glow with a warmth that will kindle hearts aflame that otherwise would have been cheerless.

CHRISTMAS SEALS

Do not forget to support the sale of Christmas Seals this year as in the past.

These tokens of cheer are sold by the National Tuberculosis Association as a means of financing the work that has helped to reduce the deaths from tuberculosis to less than half the figure of a few years ago. Their purchase gives you the pleasure of unselfish generosity, for they bring health and happiness to so many who would otherwise be hopeless. They are a species of health insurance to you, your family, and your community, for the organized nation-wide anti-tuberculosis campaign is a protection to every citizen of the land.

Seal every parcel, letter, and holiday greeting with Christmas Seals, and so send with each one a Christmas gift of health.

A SURVEY OF STATE-AIDED HOSPITALS IN PENNSYLVANIA

The State Department of Welfare has just brought out a survey of hospital finances, resources, extent of service, and the nursing situation for the fiscal year 1924, which is worthy of close study.

Leaving for individual perusal of the bulletin (No. 25) the significant figures presented, the impression received is that a highly valuable service has been performed by the Department in placing hospital accounting systems and hospital appropriations on a more uniform and orderly basis. The foundation has been laid for greater usefulness of all the hospitals of the State, and the element of favoritism and political preferment eliminated so far as it can be without further legislative action.

The conclusions drawn from the study are in some cases rather startling, and some of them are hereafter described:

(1) State aid to private charity hospitals developed as a result of the early dumping in the port of Philadelphia a larger number of indigent sick than the city was able to care for, and since that time has grown to proportions that have proved deterrent to the healthy growth of the hospitals.

(2) State aid to hospitals formerly varied from 3c to $4.32 per free hospital day. A uniform system of accounting and social service has now been installed by which the actual cost of free service can be determined and the necessity of such service to the patient can be investigated, and State payments are made on a cost basis not to exceed $3. This system has worked to the advantage of the hospitals, as earnings from patients and endowments and local aid have increased the income, even though State appropriations have been cut down because of lack of money.

(3) An institution falling below 50 per cent of capacity use is either not needed in its community or has antagonized its potential clientele, while a hospital oper-

ating at more than 80 per cent of its full capacity is too overcrowded for the best interests of patients and staff.

(4) The need for suitably located convalescent homes for adults and children of various types is obvious from the fact that free patients show a convalescent period of 16.1 days, while full- and part-pay patients show only 11.8.

(5) The cost of maintaining chronic cases in a hospital for the acutely ill is excessive. Such cases will undoubtedly increase with increased life expectancy, and it would, therefore, seem the logical development to emphasize the hospitalization of the almshouse, and to make this our line of defense in connection with chronic disorders. The county hospital should be relieved of the stigma which has been attached to it, and should be brought up to the level of the Philadelphia General Hospital, which provides the highest type of professional care for not only acute but chronic cases. In 149 hospitals, local aid ranged from $12 to $115,663 for the year, while 22 of the State-aided hospitals reported no income from local aid. This is indicative of a serious lack of responsibility on the part of the public for its local institutions.

(6) Endowment earnings were lacking in 40 per cent of the State-aided hospitals, and the income from that source ranged from $3.35 to $104,197 for the year. This emphasizes one of the serious injuries done the hospitals by our system of State-aid.

(7) One of the most urgent needs in this State is the recognition on the part of local official bodies of their duty to the sick poor. Of the total list of State-aided hospitals, 74 receive less than 10 per cent of their income from local grants.

(8) The average cost of operating the State-aided hospitals was $4.14 for the year, varying for private patients from $2.75 to $13.68 per diem, and for ward patients from 92c to $9.07 per diem, according to local conditions.

(9) Of the 143 hospitals studied, 24.5 per cent reported no home for nurses. No community should rest content until an adequate home is provided.

(10) In 1925, 12 of the Pennsylvania counties did not have hospital service within reasonable and comfortable reach of the population. This in large measure accounts for the disinclination of the physician to settle in rural communities, out of reach of modern aids to diagnosis and treatment.

(11) It is reasonable to believe that local communities would have established and maintained their own institutions without State aid, and the diversion of so large a sum during the past century into private charitable undertakings has resulted in serious handicaps in the State's own activities in the care of the mentally ill, the mental defective, the juvenile delinquent, and the criminal. A long-neglected building program calls for an expenditure of not less than $50,000,000 in order to enable the State properly to house, classify, and treat such patients. The trustees of State-aided institutions have laid upon them the serious responsibility of diminishing the need for State assistance to their hospitals by cultivating the sources of local support and by establishing business principles and sound social practice in their administration.

Never before have comparable costs and statistics for so large a group of hospitals been brought together, and a careful study of the report should present convincing evidence of the need of following up the good work already done.

Requests for a copy of the bulletin should be addressed to the State Department of Welfare, Harrisburg, Pa.

INCREASING THE PERCENTAGE OF AUTOPSIES

One of the questions of paramount importance in American medicine today is "How can the percentage of postmortem examinations be advanced to the point desired by hospital staffs?" In certain foreign countries, notably Germany, Czecho-Slovakia, and Switzerland, where as a rule, necropsies are performed on hospitalized patients in case of death, the physician is stimulated to greater thoroughness in the study of his cases than is the custom in America, where the percentage of institutional necropsies is low, comparatively speaking. Physicians need not be told of the marked benefits to medical teaching, and indirectly to the public, which would naturally result from the adoption of the custom of performing autopsies routinely.

Dr. J. C. Doane,[1] in a letter to the *Journal of the American Medical Association,* pertinently remarks: "How often does the physician, practicing in a hospital, see at postmortem that he has made gross errors in his diagnoses, even though the patients in question have been carefully and conscientiously studied?" Obviously, such errors of diagnosis can be best eliminated by the systematic performance of autopsies. The beneficial effects upon medical teaching and the advancement of accurate medical knowledge by such a course cannot be overstated.

The sympathetic coöperation of the laity, be it recollected, is quite necessary to successful efforts to bring about the desired change in this country. The time has come when American medical organizations should make a concerted attempt to enlighten the general public on the advantages of the foreign custom of making systematic necropsies, since the laity would enjoy greater benefits even than the medical profession if they were the rule in the general wards of American hospitals.

The purpose and great advantages of postmortem examinations, therefore, must be made clear to the public. Once the people awaken to the paramount importance to their own vital interests of systematic necropsies, the difficulty in obtaining permission for such examinations will have been largely overcome. The subject should be given prominence in the health-education movement now being carried on by the organized medical profession of this country. Why

1. "The Questionable Value of Present-Day Mortality Statistics." J. A. M. A., Vol. 79, No. 22, Nov. 25, 1922.

so little attention has been given to this problem in the past is reasonable cause for a feeling of surprise. It is clear that unless public sentiment can be crystallized and placed back of the efforts of the medical profession and hospital staffs and authorities to secure autopsies systematically, the desired goal will not be reached.

ESOPHAGEAL OBSTRUCTION

The importance of this subject may be determined by the number of mistaken diagnoses and, as a consequence, the error in judgment in the treatment of such cases.

The question is most interestingly presented by Dr. C. Emerson Vreeland *(Annals of Clinical Medicine,* September, 1926), who not only points out the various causes of esophageal obstruction, but goes into practical and systematic detail in the differential diagnosis and treatment of the various conditions and causes of the affection.

Not infrequently, esophageal cases have been subjected to stomach and other abdominal operations, or treated medically for cardiac, pulmonary, and gastric disorders; or cases were treated for esophageal disease which suffered from cardiac, pulmonary, or nervous disorders, or aneurysm.

The present armament of technical instruments at our command, coupled with good judgment, makes possible as accurate a diagnosis of esophageal disease as of cardiac and gastric disease.

In attempting to diagnose esophageal obstruction, one must keep in mind the possible conditions that may cause obstruction that have been found postmortem. The symptom complexes are determined by the nature and location of the disease producing obstruction. The conditions may be intra-esophageal or extra-esophageal. Under the first head are most frequently found carcinoma, cardiospasm, and idiopathic dilatation, benign stenosis of the esophagus, diverticulum, and foreign bodies. There may also be present congenital malformations, paralysis of nerves, and tumors. The extra-esophageal conditions that may cause obstruction include aortic aneurysm, enlarged heart or pericardial effusion, pleurisy with effusion, mediastinal tumors, mediastinal glands, enlargement from any infection, curvature of the spine from tuberculosis or any cause, also from enlarged thyroid and thymus and retropharyngeal abscess.

If the patient complains of pain or distress during or immediately after eating, one should exclude the possibility of esophageal disease or a condition that interferes with the passage of food or fluid through the esophagus.

The first step in the diagnosis is a careful history, and then a complete physical examination with the patient stripped and being observed while swallowing solids of various consistencies and fluids of different temperatures. If difficulty in swallowing has been established, one must determine if the condition is intra- or extra-esophageal; and if intra-esophageal, whether due to paralysis or a foreign body, or if organic, malignant or benign. The extra-esophageal conditions can best be diagnosed by a careful physical examination with laboratory tests, and this should be done before the passage of a stomach tube or a bougie.

Important points in the history are the age of the patient and duration of symptoms. Is there vomiting, regurgitation, or spitting up of mucus, and is the extruded material acid or neutral, digested or undigested food, from stomach or esophagus, and what is the quantity? Is the material bloody, fermented, putrid or frothy? Has there been loss in weight or anorexia? Have the symptoms been periodic or continuous? Do fluids or solids cause the most trouble, and if fluids, hot or cold? Is there a history of having swallowed foreign bodies or corrosives? Is there any indication in the history of tuberculosis, typhoid, or syphilis?

The location of the obstruction is learned by the passage of a very soft, flexible whale-bone bougie with a medium-sized olive end. Only the slightest pressure should be employed, as the esophageal wall is at times easily ruptured, especially if diseased. The normal curves and constrictions of the esophagus and its relation to the heart, lungs, aorta, bronchial tubes, trachea, and nerves must be kept in mind. The distance from the lower incisor teeth to the junction of the pharynx and esophagus is 6 inches, from the teeth to the cardia 16 inches, the esophagus entering the stomach ¾ inch below the diaphragm.

The normal strictures of the esophagus are at the junction of the pharynx and esophagus, 6 inches from the teeth, opposite the cricoid cartilage and sixth cervical vertebra; at a point where the left bronchus crosses the esophagus, about 10 or 11 inches from the teeth; at the cardia; and at the opening through the diaphragm, about 16 inches from the teeth. The normal esophagus will hold about 100 c.c. of fluid or air, and its wall is about 1 to 3 mm. thick.

The general practitioner to whom patients with esophageal disease or obstruction apply first for relief will do well to study very carefully the differential diagnosis of these various conditions with the help of x-ray and laboratory findings.

HEALTH EDUCATION

The Board of Education of Philadelphia has approved a new course in health education for pupils in the junior high schools of that city. The general aim of the new course is to fix health standards and strengthen habits developed in elementary grades through the study of hygiene, home economics, and physical training. Superintendent Broome believes that "from an effective body of health practices, supported by reasoned laws of health, there should emerge a will to health." The course will be taught by specialists capable of presenting the subject in a manner that will result in the application of health rules to daily practice.

It is unfortunate that all the pupils in our school system do not receive the benefit that would accrue from teaching health.

If conversations with many public-school teachers, inspection of many so-called school physiologies, and examination of the scholars in the lower grades may be taken as a guide, the common idea of a course in physiology and hygiene for school children consists in: first, a mass of intricate and useless anatomic data; second, a long exposition of the pernicious effects of alcohol and tobacco, often distinctly without scientific authority; and, third, a system of calisthenics, which is sometimes made such a fetish as to be substituted for the very necessary play recess.

So much for the system. What about the teacher? Emerson once wrote to his daughter "It matters little what your studies are, it all lies in who your teacher is." But unfortunately, the ordinary teachers, like the parents, have not been trained to impart the proper knowledge of personal hygiene.

It is refreshing to know that in Philadelphia the instruction is to be given by specialists. It may not be extravagant to say that this movement is of larger possible benefit than anything which can be done in the name of Education, for if it ever should come to pass that every pupil in the public schools should be brought naturally to a proper understanding of health and its relation to every other part of life and conduct, such a chance for the advancement of the human race would be given as no considerable section of society has ever yet had. If all easily preventable physical troubles were prevented, such an addition would be made to the energy and the good sense of the people as defies description. A merely incidental item of such social progress would be the incalculable saving of the money spent on quackery, and of the waste of energy that quackery causes.

MEDICAL DISCOVERIES BY PRACTICING PHYSICIANS

It is a conceded fact that laboratories and the exclusive devotion to research work are not at all necessary, and not, indeed, the chief requisites for medical discovery and progress. Laboratories in which teaching is not required may and do fail to make such discoveries, and others seemingly overwhelmed with routine work do make them. In the same way, as the history of medicine amply shows, the busy practitioner is precisely the one to whom we are indebted for the great truths which have placed our science in the position of power and honor it holds today. The motive of vital love of one's fellowmen is needed to create the spur of endeavor and to quicken the inventive brain, and this is fully as likely to be found in the man busied every day with concrete cases of disease and suffering as with one who is more isolated.

Surely no one would wish to discourage the foundation and support of city laboratories. Both methods of research are useful and necessary. But in the acknowledgment of their great functions, that of the lonely and country practitioner is too easily underestimated. The possibility of beneficence and of discovery open to him are as great, and he should never lose sight of the fact. He sees disease at first hand and in the making. The expert pathologist too frequently sees but the end results, the completed dead product of disease. It must be remembered that infectious diseases are by no means all that exist or all that we have to study, and moreover that we are possibly now neglecting attention to those functional changes which are the first stages of organic disease.

SYMPTOMS WITH LUNCHEON

It is considered the height of ill breeding to speak of or hold conversation about one's body, or unduly call attention to one's person in any way. Yet, we hear endless discussion of every member of the body, and all its ailments, on trains, at afternoon parties, in hotel lobbies, and even over the lunch table. Nothing is so popular at "bridge parties," and elsewhere as the subject, "Since my operation, etc." It is peculiar to hear the number of women in public dining rooms having a regular orgy over their physical ills. In the description of their afflictions, nothing is left to the imagination. They go into high C, and seemingly enjoy the gruesome picture with each mouthful.

Nothing is more disgusting than a public autopsy or physical dissection served at luncheon or in any public place. Good breeding is never

old fashioned, and is welcome at all times, for it is never offensive. In the dining rooms of the hotels in a town where is located one of our best-known clinics, are signs requesting patrons not to discuss any operations that have been witnessed, for obvious reasons.

We have in mind a surgeon, now deceased, who devised an operation purporting to correct gastroptosis. He ate his meals for years in the dining room of a well-known boarding house near his office. The table to which he was assigned seated six people. With the exception of himself, they were all lay people, the number of females predominating. It was his custom at each meal to discuss his operation, and the women vied with each other as to who could give most accurately all the data thus received. As "fallen stomach" was a popular complaint with women, the audience spread the gospel as they heard it, advocating to those suffering from this condition the operation which they could so accurately describe. The results were all that could be desired, for had they not heard three times a day the surgeon who devised the technic, detail the wonderful cures that had been obtained? Yet nowadays one never hears any reference to this procedure.

PSYCHOLOGISTS VERSUS NEUROPSYCHIATRISTS

Those who are interested in mental hygiene watch with a great deal of interest the relationship of psychologists to neuropsychiatrists in mental health work.

This interest has been particularly aroused in the light of recent developments, which are: first, many psychiatrists feel that the practical application of some of the contributions of the psychologists hinders more than aids the progress of scientific mental medicine; and second, that personnel officers appointed to our institutions of learning, with the duties of determining outstanding defects and particular abilities of students requiring special attention, giving to each individual case thorough scientific treatment from psychological and other angles, is a position which should be shared with a neuropsychiatrist, or in the event only one professional man could be employed for this purpose, it should be preferably a neuropsychiatrist. They also feel that practical results in mental health could best be obtained in our public-school system under the direction of a neuropsychiatrist assisted by a psychologist, basing their belief on the fact that a neuropsychiatrist is not only well versed in psychology but in medicine as well.

When one reviews the contributions of neuropsychiatrists and psychologists to mental medicine, it is readily seen that psychologists have given to us the mechanisms of the normal mind, a contribution which has been most helpful. On the other hand, neuropsychiatrists have given to us real scientific medical, laboratory and psychologic contributions in the study of the prevention, recognition, and treatment of mental disorders, diseases and defects, while the overlapping of the two at times has been most effective.

If any such misunderstanding should exist, surely the psychiatrist and psychologist are capable of recognizing their respective fields, and will continue to make their contributions from each angle, each harmoniously overlapping the other, when and as is necessary not only for the good of scientific mental medicine but humanity as well.

JOTS AND TITTLES

Our Children

At this season of peace on earth and good will toward men, we should incline with peculiar sympathy to the recommendations of Miss Neva R. Deardorff, secretary of the Pennsylvania Children's Commission, to revise the laws regulating care of the State's dependent children. Miss Deardorff tells us that indenture forms dating back to 1630 are in use in our State to bind out children to perform all sorts of drudgery without adequate investigation of the homes into which they are going or any subsequent supervision. Insufficient coördination of programs among child-caring organizations, placing of children in almshouses, and handling of child delinquents by Quarter Sessions, Common Pleas, and even Police Courts instead of the Juvenile Courts, are among the reforms the Commission hopes to institute. All laws not in keeping with the best modern thought in treatment of child dependency should most assuredly be repealed, for the State cannot afford to do less than its best by its future citizens.

Six foreign countries have a lower infant-mortality rate than the United States, and our maternal-mortality rate is higher than that of any of the European countries. Continued effort, therefore, to safeguard American mothers is vitally necessary. This should be borne in mind particularly as the bill providing for a two-year extension of the Maternity and Infancy Act will come before the Senate at its December session. Forty-three states and Hawaii are coöperating with the Federal Government in conferring the benefits of this act on 944,220 children and 179,464 mothers. Outstanding accomplishments during the past year include the holding of 20,155 prenatal and child-health conferences, at which 10,554 mothers and 159,244 children received examinations by physicians. Nurses held 6,407 conferences, at which 7,460 mothers and 31,880 children were advised and helped; and 283 permanent new health centers were established. The Federal overhead has been kept at a minimum, only 9 persons (3 physicians, 3 nurses and 3 clerks) being regularly employed in the maternity and infant hygiene division.

According to the *Medical Journal and Record*, through a gift of the Laura Spelman Rockefeller Memorial, the Yale Psycho Clinic for Infancy Research has been enabled to extend its program of psychological investigation and its clinical service to young children. The staff of the clinic has been increased by the appointment of several research associates. Emphasis is

being laid at present on coöperative research into the early stages of mental development, which will be concentrated on the first two years of infancy and bring into coördination data from different fields, including mental and physical measurements, language and motor capacity, habit and personality development.

A Christmas Suggestion

WHAT MORE APPROPRIATE GIFT can a physician give to his friends than one that will help to promote their health and thus their happiness? A subscription to *Hygeia* fulfills this specification, and can be given with the certainty that it will be appreciated by the recipient. The special holiday rates are as follows: one subscription $3, two subscriptions or one subscription for two years $5, three subscriptions or one subscription for three years $6, each additional subscription $2. On request a beautiful gift card will be sent just before Christmas.

Public Welfare

ONE OF THE BANES OF OUR EXISTENCE is the insanitary condition of the atmosphere of our cities produced by coal consumption. At the recent session of the International Coal Conference held at Pittsburgh, Dr. F. C. R. Bergius, of Heidelberg, Germany, described his process of converting bituminous coal into gasoline. It was intensely interesting to hear Walter E. Trent, of New York, detail how coal may be pulverized, subjected to heat, and made to flow like water. Both of these methods may be of economic worth by using the low grades of fuel now left unmined. Plans were announced for a test of the oil from pulverized coal, the demonstration to take place in December at Kansas City, where an automobile engine will try out the new source of power. If the test is successful, as is confidently expected, capital will be available, for the possibilities are very far reaching. Should the proposition be realized, much will be saved by property owners in the elimination of coal soot and smoke, which should strongly appeal to the people; the railroads will haul less coal, and health should be promoted by the reduction in dirt and noise.

MINE SEWAGE pollutes 75 per cent of Philadelphia's drinking water, and discharge of sulphuric acid into the large and small rivers of the State has already served to ruin some of Pennsylvania's finest streams. This element not only kills fish in wholesale quantities, but destroys plumbing facilities as well, because of its corrosive power. It would be distinctly to the advantage of the public health to enforce existing legislation, and where needed, to reinforce present laws by new ones which will safeguard the water supplies of the entire population.

RECORDS OF THE CHICAGO HEART ASSOCIATION show that deaths from heart disease have doubled in fifteen years in that city. To quote from the report: "In the year 1910 there were 2,110 deaths attributed to heart troubles. Last year 6,309 persons in Chicago succumbed to cardiac ailments. Twenty years ago the death rate by heart disease to each 100,000 population was 103.3. In 1925 it had risen to 210—an appalling advance."

PERHAPS EXPERIMENTS performed at Yale and Colgate Universities on the effect of loss of sleep may help to explain this alarming increase in cardiac disorders. Mental work seemed to be improved on short sleep rations, but the caloric energy expended when doing the mental work was enormously increased with a decrease in sleep—about three times as great after six hours' sleep as after eight. Inducements to short hours of rest are so great at the present period of our development, it is a safe statement that most of us are losing needed sleep. The increased energy thus required to carry on daily activities may well be instrumental in promoting development of heart affections, and the curfew may yet become a public-health measure.

QUARTZ GLASS has been installed in several of the animal houses of the London Zoölogical Garden to admit the ultraviolet rays of the sun. The condition of the animals is said to have improved perceptibly, and some which have moped and refused food under the old conditions have revived. If this is good in the zoo, why not in our homes and offices?

THE POSTAL CLERK AND MAIL CARRIER, in addition to their work in strictly postal matters, are able to care for the sick and injured in time of emergency and do the correct thing. This has been accomplished by the circulation of a little booklet on first aid, and by the equipping of many post offices as first-aid stations. Virtually every large post-office in the country has a completely equipped first-aid chest, and facilities are arranged in all the smaller post offices and railway mail terminals in the country for treating persons in case of accident or illness. While all these facilities are primarily for the protection of postal employees, the very fact of their existence reacts to the benefit of the public at large, since it is in constant contact with postal service and the various post offices. The equipment is at places which are always reasonably close at hand, and the postman making his rounds has become a public protector as well as a public servant.

SOME OF OUR TUBERCULOSIS WORKERS are advocating health camps in every community for undernourished children. If this is a good thing, why would not health camps for everybody be better? Outdoor vacations are gaining in popularity, and it is to be hoped that it will not be long before every municipality may have available a place where not only children, but entire families can, at slight expense, enjoy the benefits of the outdoor life. The improvement in health of the population would be worth the slight outlay. This subject is commended to the consideration of health councils and federations, as well as other interested organizations throughout the state.

Medicolegal Notes

IN THE CASE OF DR. SAMUEL LAMBERT, of New York, who claimed a constitutional right to prescribe spirituous liquors without limit, the United States Supreme Court, by a majority of one, and with four justices dissenting, has held that physicians can lawfully be restricted under the enforcement law to prescriptions of not more than one pint of spirituous liquor to a patient each ten days. Declaring the evidence in the case had disclosed a difference of opinion among practicing physicians on the value of malt, vinous, and spirituous liquors for medicinal purposes, the Court said that the preponderance of opinion was against their use for such purposes, and that among doctors who prescribed liquor "there are some who are disposed to give prescriptions where the real purpose is to divert the liquor to beverage uses. Pointing out that Congress had prohibited the use of intoxicating malt liquor for medicinal use, and that the court had unanimously sustained that law, the Court held that Congress may equally restrict the prescription of other intoxicating liquor for medicinal purposes. The minority held that the decision in the malt-liquor case was not controlling because malt liquor had no substantial medicinal value. While the value of spirituous liquors for such use is controversial, they insisted that Congress, in permitting their use, should be accepted by the Court as conclusive evidence on the point of value, and that the prescription of such liquors in

good faith for medicinal use could not be prohibited by Congress. The minority decision described the majority decision as an invasion of the power of States to control the practice of medicine and as "fraud" upon the Constitution.

The Philadelphia County Medical Society has unanimously adopted the following resolution: "It is the sense of the Philadelphia County Medical Society that Senate Bill No. 4085 and House Bill No. 11612, which aim to impose added restrictions upon physicians with regard to the carrying out of the provisions of the Harrison Narcotic Act of December 17, 1914, should be defeated. The proposed bills do not allow any physician to defend himself if charge is made against him personally in the use of narcotic drugs or in his prescribing narcotic drugs for other persons, and would require new and burdensome record-keeping without any additional safeguard in the carrying out of the Harrison Act. The proposed legislation would also permit persons without educational standing to act in judicial manner to pass judgment upon charges made against any physician and would not afford him right to notice and hearing before final action would be had in such case."

New Discoveries in Serology

According to Dr. Ludwig Hekteon, head of the department of pathology of the Rush Medical College, two young men of the McCormick Institute have developed a new skin test applicable to tuberculosis, and similar to the Schick test for diphtheria and the Dick test for scarlet fever. The fact that serum from a tuberculous individual, when mixed with the new material, prevents reaction, is said to indicate that there is present in the tuberculous a certain anti-substance which combats the tuberculosis bacillus, and to suggest an entirely new antibody in the patient's blood. Of normal or supposedly normal individuals, 84 per cent gave a positive reaction to the skin test, while 100 per cent of patients with active tuberculosis gave a negative reaction. While he was not prepared to say that all the facts had been conclusively established, Dr. Hekteon expressed the opinion that the new method held out a definite hope.

Erysipelas antitoxin is now being used in Pennsylvania hospitals in a large number of cases, with marked success. It has been produced independently by Dr. Thomas M. Rivers, of the Rockefeller Institute, New York, and by Dr. Conrad Birkhaug, of the Rochester University Medical Laboratories, whose results were each confirmatory of the other's work.

Interesting Additions to the Literature

In this number of the Journal there will be found an interesting symposium on goiter in the report of the Philadelphia County Medical Society. The report of the Luzerne County Society, also published in this number, contains some valuable suggestions to those interested in orthopedics.

The Metric Advance, by Aubrey Drury, is a 24-page pamphlet devoted to arguments in favor of legislation now pending in Congress to authorize the Department of Commerce to establish commodity quantity units for general use in merchandising after 1935, standardizing the yard to the meter, the quart to the liter, the pound to 500 grams, decimally divided. While presented in rather a prejudiced manner, the author cites sufficient facts to incline the reader toward revision to the metric system. The fact that practically all civilized nations except the United States and the British Commonwealths have adopted this system of merchandising, and the prevalent chaos in our own standards, are excellent arguments why we should join the procession. The only objection would be the annoyance of making the change from accustomed weights and measures, although this would perhaps be of less importance to the medical profession, which is already familiar with the metric measures. Copies of the pamphlet may be secured for 10 cents from the All-America Standards Council, 681 Market St., San Francisco, Calif.

An abstract from *Health*, official journal of the Department of Health of the Commonwealth of Australia, published in September, 1926, will be of interest to our readers. The author of the article will be remembered as a former Commissioner of Health for Pennsylvania, and is now Medical Director of the National Committee for the Prevention of Blindness.

A Method of Teaching the Public Health Point of View to the Medical Student.—In the *Journal of the American Medical Association* of 15th May, 1926, appears an article under the above heading from B. Franklin Royer, M.D., Sc.D., in which is described the system of teaching medical students at the Dalhousie University Medical School, Halifax, Nova Scotia; this system having as one of its main objects the placing of the public-health and social-medicine aspects of the medical practitioner's work in the right perspective before the medical students passing through that university.

Dr. Royer voices an impression that the medical profession is not approvingly coöperative, and in some instances is antagonistic to present-day developments in public health, and is fearful of state medicine; and he is of opinion that the reason for this attitude lies in the fact that the teachers of hygiene in medical schools have hitherto failed to teach the medical student the right point of view towards social medicine and public health.

At the Dalhousie University Medical School at Halifax a new departure has been taken in the teaching of preventive and social medicine and of public health. The student, in addition to receiving tuition at public-health clinics, is required to follow up from the out-patient medical and surgical clinics, the environmental conditions of the patients attending the clinics, and thus learns to recognize how much of the condition that brought the patient to the clinic is due to environmental fault, and also to realize that in many cases medical problems may be corrected only by giving proper attention to environmental faults. In this way the student realizes that social medicine is far from being state medicine, and that physical examination of the patient and the writing of a prescription are only a small part of the sum total of the practice of medicine.

The following is an outline of the system on which is based the teaching of the public-health aspect of his work to the medical student at the Dalhousie University Medical School. A special building has been erected for the accommodation of all public-health clinics and out-patient medical and surgical clinics. The general social agencies of the city are also accommodated in the building, as are also such activities as baby health, and child-welfare centers, dental clinics, venereal-disease clinic, and other public-health activities. The Dalhousie University Medical School furnishes all medical personnel, and organizes and maintains the out-patient departments and ambulatory services such as pediatric, general medicine, surgical, and neurological services.

The professor of hygiene and preventive medicine at the University exacts of the medical student a complete home environmental study and habit study of assigned cases attending the out-patient clinics. The student's studies, therefore, include home visits and home studies covering every detail of living, diet, exercise, sleep, ventilation, clothing, etc. The student makes his report of home environment, and his recommendations, and this is checked against a report of the same case made by a trained officer. In this way the instruction given at the University in public health and hygiene is supplemented and is practically applied by the student in the same way as instruction in medicine, surgery,

pathology, etc., is followed up by the practical application of the principles at the bedside, and in the surgical clinic and the postmortem room.

This gives the student a practical view of applied social medicine in the way that every medical practitioner should apply it.

It is considered that as a result of this widened outlook of the medical practitioner there will be on the part of the medical profession a coördination with executive health work which will multiply the effects of public-health endeavor manyfold.—*M. J. H.*

PUBLIC HEALTH

German View of the Effects of Tobacco.—Nicotin, states Prof. Heinrich Kionka, exists in tobacco in quantity varying from 1 to 3.8 per cent, while in France, where the plants are set wide apart, the percentage may reach 6. Few people, he thinks, realize what a deadly poison this alkaloid is; one drop of the fluid preparation is fatal to a dog and nearly so to a man. Its action on the nerve centers is violent stimulation quickly followed by paralysis; function is accelerated for the time, and unstriped muscle is stimulated by the oversecretion of adrenalin. It is partly this tonic effect that makes tobacco so universally desired, and partly the assistance which it gives to digestion by making all the glands secrete more copiously. The sedative effect he attributes to carbon monoxid rather than to nicotin. This, it is stated, is present in tobacco smoke in startling quantities, and is the real cause of most of the symptoms of the nonsmoker who feels unwell when surrounded by eager devotees in a railway compartment or unventilated room. The reason why nicotin does not do more harm among smokers is, of course, that tolerance is easily acquired, and though the beginner shows signs of poisoning at once, he soon becomes immune. Nevertheless, the limits of this tolerance are easily passed, and, according to Professor Kionka, the inveterate smoker who oversteps the mark suffers far more than the beginner, for his tissues are more or less saturated and he has less resilience. The quantity of nicotin present in tobacco smoke varies considerably. The content in the leaf is said to be unexpectedly independent of the strength of the tobacco. Whereas, with Dixon's apparatus 100 g. of light cigars gave up 1,000 mg. of nicotin, compared with 480 mg. yielded by the same weight of strong cigars, two German brands of so-called nicotin-free cigars gave 420 and 320 mg. respectively. The quantity the smoker actually absorbs varies with the capacity of the cigar, cigarette, or pipe for distilling and trapping the nicotin from the burning tobacco. A long pipe is better than a short one, a dry cigar than a damp one, and the first half of any smoke does much less harm than the last. The cigarette, says Prof. Kionka, is the worst of all, for its paper covering collects the products of distillation, which are revaporized and absorbed as the cigarette burns down to the end. The smoker who relights a pipe or cigar, it is stated, probably absorbs more poison than he would from ten straightforward smokes, while chewing and snuff taking are regarded as not nearly so harmful as smoking, because only a little nicotin is absorbed. There is hardly a single pathologic condition, Professor Kionka says, that tobacco cannot cause or aggravate. It sets up sclerotic and necrotic changes in the heart and large vessels, causes color blindness and scotoma, damages the hearing by causing swelling and congestion in the inner ear, and, in specially disposed subjects, will produce a toxic psychosis or any of the minor psychic and nervous troubles that go with cumulative poisoning of the sympathetic system. Like all other habit-forming drugs, he continues, it produces worse effects when it is a psychologic factor. The ordinary man smokes because he likes it, and cuts down his consumption when he has the familiar symptoms of oversmoking, but the nervous man who uses it to tone his nerves up for brain work, when he should have learned to control them otherwise, may find himself in a bad way. Provided the poisoning has not continued so long that there are organic changes, says Professor Kionka, the damage in all cases of chronic nicotinism is largely reparable by stopping all tobacco and purging the system by a course of exercise, baths, and medicine. Iodin of potash is also useful. If nicotin is harmful to adults, he concludes, it is deadly to adolescents, and most civilized countries enforce stringent laws against smoking by young people.—Quoted in the *Lancet* for March 13, 1926.

An Aid to the Medical Practitioner.—Physicians treating venereal-disease cases have frequently expressed a need for a pamphlet containing instructions and advice to be given to such patients. Due to the nature of these diseases and the regimen which proper treatment requires, the need for such a publication has long been apparent. Some time ago the U. S. Public Health Service prepared a pamphlet known as "Important Confidential Information" expressly for this purpose. The leaflet is in two parts, one dealing with gonorrhea and the other with syphilis. Advice is given, among other points, on the following: Importance of continuing treatment until cured, proper diet while under treatment, proper care to prevent the spread of the disease, the futility and danger of quacks and self-treatment, sex conduct, and marriage.

Many physicians have found this publication a valuable aid in securing the coöperation of the patient while under treatment, and also as an aid in holding the patient until cured or rendered noninfectious. Copies of this publication are available from most State Departments of Health, or they may be secured by writing to the U. S. Public Health Service, Washington, D. C.

Keeping Fit.—This is primarily an age of physical fitness. Growing boys everywhere are bending their efforts to the development of muscular ability and a sound physique, whether their purpose is to excel in one of the many fields of athletics or to prepare for a life of vigorous manual effort. To-day the growing American youth has before him as shining goals the great champions in the various fields of sport. Our boxing champions, our golfing champions, our swimming champions are generally considered the champions of the world.

But the physical perfection necessary to become a champion in any field of physical activity is not a matter of accident or chance. Back of every champion you will find a groundwork of sound physical development which has been maintained by constant exercise and intelligent training. Every normal boy has the desire to attain a high degree of physical fitness. Many, however, are handicapped by lack of proper information on training rules and care of the body.

The U. S. Public-Health Service has prepared a publication to fill this very need. This publication entitled "Keeping Fit" gives authoritative information on sound physical development, illustrated with numerous charts, diagrams, and pictures. Other important information

on personal hygiene, with special chapters on sex hygiene for the growing boy and young man, are included. Readers may obtain this publication free of charge by writing to the U. S. Public Health Service, Washington, D. C.

Interesting Statements from Health Authorities.—At the meeting of the American Public Health Association, held at Buffalo, N. Y., in October, Dr. Milton J. Rosenau, of the Harvard School of Public Health, stated that an increase in the number of cases of infantile paralysis is looked for in the United States next year. The expectation is based on the fact that the disease has shown a tendency to recur in cycles of about four years. Discussing the health hazards of rural mothers and children, Dr. J. H. Mason Knox, Chief of the Bureau of Child Hygiene, Department of Health, Baltimore, asserted that the maternal and infant-mortality rates seem to be somewhat lower in country districts than in cities. He added that death rates are lowered by a general application of approved methods. A side of the question less favorable to the rural districts was revealed by Dr. Donald B. Armstrong, of the Metropolitan Life Insurance Company, who told delegates that farmers' families were leaving the old homesteads and accepting apartment life in the cities because they thought they were finding better health and medical facilities.

HOSPITAL ACTIVITIES

Shall We Pool Our Assets?—To what extent can the present-day nonmunicipal hospital afford to play the rôle of Good Samaritan? In the face of existing costs how can this modern Good Samaritan meet the difference between what a patient pays and what the hospital spends on him? The needs of the sick are not met wholly out of public funds. In theory, the cure of human ills and the protection of the community's health may be left to the constituted civic authorities, the cost to be defrayed from the public purse. In practice it works out quite differently, and there is a decided question whether any public treasury could actually meet the total cost of caring for the economically dependent members of the community in need of hospital care. The well-to-do can pay for needed hospital and professional care, and are charged accordingly. Not so comfortable is the situation of that great middle class, forever between the two economic millstones. The poor simply cannot meet the cost of necessary hospital care.

It seems as though the problem in the city whose social agencies are successfully supported through a community chest or fund were relatively simple. No stronger appeal exists than that on behalf of the doubly unfortunate sick poor. It greatly strengthens the community chest presentation. The hospital performing this community service ought to be able to secure what it needs through the agency of the community chest. With the per-capita hospital costs still mounting as the science of modern hospitalization and medical care makes its impressive advance and the standards of care undergo constant improvement, it becomes increasingly certain that the poor, and to a considerable extent the middle classes, are not, under our present economic order, going to be able to pay for this costly hospital care. The hospital must deliberately turn to the community for private donations toward the cost of its free work.

But in turning to the community, the hospital must face an increasing rebellion on the part of men and women whose names readily find their way into the prospect lists of numerous hospitals and organizations seeking funds, against the swelling flood of appeals. When an individual receives in a single year nearly two thousand separate appeals, he may well look for some form of relief. When a man who thoroughly believes in the philanthropic work done by the hospitals wishes to contribute his share to meet the patent need, his initial good will may be turned into irritation when appeal after appeal finds its way to his desk.—*Modern Hospital.*

Educating the Trustees.—A realization of the importance of trustees being thoroughly cognizant of all hospital administrative procedures is making itself evident to a greater degree than ever before. With but few exceptions, superintendents bemoan the fact that the members of their boards are not informed about the inner workings of their institutions. At the recent convention of the American Hospital Association there were more trustees in attendance than ever before, which augurs well for the hospitals that they represented, but that there should have been present a great many more was voiced by hospital executives on every hand. With a true sympathy for the problems that the superintendent faces daily, with an appreciation of the enormous benefit that the hospital is to the community, with a perfect understanding of the misunderstandings under which every hospital labors, and with a complete knowledge of the needs of the hospital, better institutions, serving the communities more adequately, on a firmer economic basis, would be the inevitable result.

It is sometimes argued that the board should have sufficient faith in the superintendent it engages to let him alone, and with this there is full agreement. But the trustees' confidence in the directing head of the institution would only be strengthened if they knew, almost minutely, the work which that executive was doing. Trustees are business men who have won their success by their ability to choose executives, and most of them are proud of the fact that they know thoroughly the technic of every executive position in their respective industries. This is essential for good management, and an aid to the men who are working for them. How great a help it would be to the superintendent if each member of the board brought with him to the board meetings the same grasp of hospital problems he has of his commercial enterprises. Hospitals where the boards are active are far ahead of those where the board is either dormant or semi-active. There are exceptions, but usually where one man is dominant he gives the superintendency to the lowest bidder and loses him when the first good offer comes along. This must not be confused with educating the trustees, because it is nothing of the sort. This is merely a case of gross ignorance, and if the members of the board really understood hospital work they would quickly realize the folly of constant turnover among the personnel. The trustee who knows his hospital seldom finds fault with the director.—*Modern Hospital.*

Make the Patient Comfortable.—In reading the chart notes of the nurse, one frequently encounters the comment that at certain intervals she "made the patient comfortable." What an easy and commonplace thing it seems simply to increase the comfort of the sick man by the practice of those homely methods that every mother knows so well how to perform. In another column of the nurse's record is set down the confirming evidence that she had administered the digitalis or morphin or quinin that the physician had ordered. From the patient's standpoint, the straightening of pil-

lows, the smoothing of sheets, the moistening of lips, or the slaking of thirst, are all vastly more important than the amount of digitalis he gets or the result of his basal-metabolism study. The patient often remembers the kind of mattresses upon which he lay long after he has forgotten the comfort which his leg splint afforded him. Moreover, making the patient comfortable may start at the superintendent's desk, by the purchase of good beds and back-rests, long and wide sheets, adequate air mattresses and rubber rings, or even a smooth-riding ambulance.—*Modern Hospital.*

Should the intern be permitted to charge a fee for the execution of insurance papers?—Can hospitals require him to perform this duty if he demurs? Some hospital administrators have removed this temptation from the young physician by requiring that the hospital records of the deceased patient, including his death certificate, be brought to the office, and that the insurance papers be executed by a clerk who secures the necessary information from the patient's chart. In hospitals which are located in cities of some size where a bureau of vital statistics is maintained, those who desire to have insurance papers filled out are referred to this bureau, where a certified copy of death is issued upon the payment of a small fee. Experience has taught most hospital administrators that of the two alternatives mentioned above, it appears best not to allow interns to execute insurance certificates. If no other way is practicable, however, interns should be required to fill out these papers, and should be prohibited from accepting payment therefor. The same rule should apply to sick- and accident-benefit papers, a considerable number of which are presented for execution to the physicians of most hospitals.—*Modern Hospital.*

Does the hospital have a right to limit the fee which the graduate nurse may charge for her service to private patients in an institution?—Nurses sometimes feel that the hospital has no more right to designate the recompense that they should claim from private patients than it has to limit the fee charged by the physician or surgeon. In a way, this argument has some weight. A difficult problem arises when a patient who has been cared for by a graduate nurse at a definite consideration is moved to a hospital, and this same nurse is prevented from receiving the same fee for her service that she received when the patient was being treated at home. Complaints arising as a result of a charge that was considered exorbitant by a private patient, of course, should be referred to the superintendent of nurses, and through her to the administrator of the hospital.

It has been suggested that hospitals might have a sliding scale of rates which graduate nurses are permitted to charge. Certainly anything that brings about mistrust of the hospital's motives immediately becomes a matter over which the administrator of the hospital and the board of trustees must exercise supervision. In some institutions a definite rate is fixed which is in accord with current rates for nursing service, and private-duty nurses are required not to exceed this amount. In other institutions, this problem is solved satisfactorily by the adoption of a system whereby the hospital submits a bill to the patient for nursing service, and in turn pays the graduate nurse for her work. While this system has some drawbacks, it appears to have much to recommmend it. The hospital, therefore, should deal with the matter of charges made by graduate nurses, if the former system is in vogue, in the same manner as it would with a physician or surgeon who charged unusual or exorbitant fees for his services. If the latter system is the one used, the hospital can definitely regulate the rates that graduate nurses are permitted to charge.—*Modern Hospital.*

Should it be considered humiliating by the members of the visiting staff for the hospital to insist on their registration upon their arrival and departure from the institution?—To the great credit of the medical profession, it may be stated that there are but few ethical physicians who require any supervision in regard to the time that they spend in the hospital. The urge to supply the best medical care for the hospital patient is so strong among physicians everywhere, that their desire faithfully to fulfill their professional duties simplifies hospital record keeping. On the other hand, modern business methods require that accurate records be kept concerning all the activities of the hospital. This, of course, includes not only an accurate cost-accounting system but just as accurate clinical and personnel records. Moreover, there are occasionally physicians the requirements of whose practice are so exacting that they are tempted to slight in some degree their hospital visitation, provided they have been told by telephone that there are no urgent cases on their service.

In some hospitals, rather elaborate electrically controlled systems for the chiefs' "in-and-out" registration, have been devised. These systems contemplate the immediate information to the telephone operator of the physician's arrival, and a like notification of his departure. In conjunction with this system there has been added in some institutions a permanent time registration for the hospital records. Occasionally, hospital administrators feel that the visiting staff should comply with the same rules in regard to "in-and-out" registration as do other institutional attachés. Time-clock registration has been found to be not a little objectionable to physicians, who feel that their professional dignity has been somewhat transgressed by this requirement.

On the other hand, from the standpoint of guarding the professional interests of the physician, prompt notification of his arrival at the hospital is useful. Urgent calls from his own practice can be more intelligently and speedily transmitted to him if the operator is promptly informed not only of his presence in the institution, but of the department which he may be visiting. Where no electrical system is in use, hospitals require the signature of chiefs on a visitation book. Finally, "in-and-out" registration by the chief is useful to him and to the hospital because messages and consultation requests that might be difficult to deliver if no such system were in use can be left at the central point where this registration is done.—*Modern Hospital.*

Seek More Favorable State Industrial Law.—The Hospital Association of Pennsylvania is making every effort to stimulate active interest among the hospitals of the State in the necessity of general support of its campaign for more favorable State laws affecting payment for hospital service in industrial cases. The most recent action of the Association was the authorization of 1,000 reprints of the paper by John M. Smith, superintendent, Hahnemann Hospital, Philadelphia, and executive secretary of the Association, on considerations in amending or enacting a workmen's compensation law, and a like number of reprints of the article by Miss Eileen F. Evans, research secretary, Consumers' League of Eastern Pennsylvania, showing that 14 hospitals of the State, in the course of six months, had incurred deficits amounting to almost $20,000 because of inadequate payment for industrial patients.—*Hospital Management.*

Why Do Executives Change?—(1) Adverse conditions existing in the hospital, such as lack of funds, faulty organization, absence of foresight and vision on the part of trustees, and interference with the executive functions, either by trustees or members of the staff. (2) Inadequate salary, or absence of opportunity for advancement. (3) Fault in the education, training, or personality of the incumbent. (4) Political interference or domination. (5) The improper preparation and training of so many people who enter the hospital field as executives, the lack of familiarity on the part of so many trustees with the scope of hospital executive service, and with the need of authority and responsibility to be delegated to the superintendent in matters of hospital supervision. (6) A factor of some importance is the use of small hospitals by men and women to gain experience in hospital administration, and as a stepping stone to higher positions. (7) The many changes are due frequently to lack of ability to organize and to plan the work of the hospital with these three factors in mind: the patient, the doctor and his responsibility for professional service, and proper coöperation with the board.—*Hospital Management.*

Death Percentages.—A study of annual reports throws some interesting light on the methods used by different hospitals to determine the net death rate. Hollywood (Calif.) Hospital in its report has a total of 172 deaths, but from these it deducts 56 deaths under 48 hours, and 27 stillborn, leaving a net total number of deaths of 89. The gross death rate computed by the hospital is 3.79 per cent, and the net death rate 1.94 per cent. Rhode Island General Hospital, Providence, in its annual report lists the total number of deaths for the year as 603, and indicates that there were 204 occurring within 48 hours after admission. A line referring to percentage of deaths reads: "Deaths proportionate to total number of patients treated, 7 per cent." Vancouver General Hospital also classifies deaths to some extent. Its report lists total deaths as 557, from which is subtracted those occurring within 48 hours, 1,372; and premature, nonviable, 12; leaving net deaths 413. Coupled with this is the total number of patients treated, 14,127, and stillborn, 52. Winnipeg General Hospital in its report merely has a line: Mortality 4.10.—*Hospital Management.*

Who Should Meet the Cost of Antirabic and Other Expensive Treatment Often Required by the Indigent Patient?—A basic statement that cannot be refuted in hospital practice, is that the hospital has a moral obligation to furnish any and all types of treatment that favor the patient's recovery, and serve to prevent any untoward accident that will endanger his life or health. In many localities, the money secured from the dog tax is utilized by the county commissioners to defray the expense of treatment of those bitten by animals infected by rabies. Sometimes the process of securing payment for this treatment is so complicated and bound up with legal red tape that the hospital prefers to stand the expense of such sera without endeavoring to secure payment thereof from other quarters. In the case of the use of antitetanic and antistreptococcic serum or other biologic products, which are often no little expense, the duty of the hospital is clear; treat the patient first, and later endeavor to collect a recompense for the drugs used. Even though the patient is known to be without funds and friends, no hospital ever views the question of saving human life in the light of the expense that it entails.—*Modern Hospital.*

INDUSTRIAL MEDICINE

Syphilis in Industry.—(1) It is possible with a proper technic to get many Wassermann reactions in industry with comparative ease. (2) Early treatment of syphilis is the best preventive of complications following accidents, and periods of disability are thus cut down. There is a reduction in sick benefit payments for the same cause. (3) A perfect follow-up system is possible as long as the employee continues his employment. (4) The work has three aspects: It is a protection to the individual, to public health, and to industry. (5) Blood was taken from 3,447 individuals. Between 3.5 and 4 per cent gave positive reactions. (6) Syphilis is costly to industry and to the State; the taking of more bloods will help greatly in reducing the incidence of syphilis in the community.—W. A. SAWYER AND B. J. SLATER in the *Journal of Industrial Hygiene.*

The Modern Treatment of Carbon-Monoxid Poisoning.—Carbon-monoxid poisoning may present three distinct clinical pictures: (1) Cases in which relatively small amounts of carbon-monoxid gas have been inhaled. (2) Cases in which the gassing has been severe, but in which respiration still continues when treatment is instituted. (3) Cases in which all respiration has ceased.

It has long been the custom to apply artificial respiration at the earliest possible moment, and to use oxygen either with or without some form of pulmotor, when this was available. The object of all treatment is to fill the alveoli of the lungs with a maximum amount of oxygen in the shortest possible time. The chief difficulties in the way of this procedure lie in the fact that an individual who has been overcome with carbon-monoxid gas tends to take very shallow breaths —if he is breathing at all—and consequently it is very difficult to deliver a sufficient quantity of this oxygen to his lungs, even if plenty of it is available.

It was with this in mind that Drs. Henderson and Haggard of Yale University introduced the carbon-dioxid-oxygen treatment of carbon-monoxid poisoning a few years ago. The purpose was to stimulate respiration by means of the carbon dioxid, through its physiologic action on the respiratory center in the medulla. (As is well known, it is the normal carbon dioxid in the body which is the principal factor in producing the normal breath cycle.) It was hoped that with an increase in the depth of each inspiration, more oxygen could be delivered to the pulmonary alveoli in a shorter period of time.

There has been much difference of opinion as to the possibilities as well as the dangers of this new therapy. A recent review of the experience with it for a period of two years, has caused Dr. Drinker of the Harvard School of Public Health to come out very strongly in its favor.

The method now in use is to give persons overcome with carbon monoxid a mixture of 95 per cent oxygen with 5 per cent carbon dioxid (CO). Not only does the carbon dioxid stimulate respiration in a way to assist greatly in getting oxygen to the lungs, but it has been found that it increases the blood pressure and so improves the circulation in the lungs. In carbon-monoxid poisoning the blood pressure drops, with the result that cardiac function which is already impaired through a deficiency of carbon dioxid in the blood, suffers still further from inadequate coronary circulation.

The use of the 95 per cent oxygen and 5 per cent carbon-dioxid mixture has shown itself, as a result of two years of intensive application, to be the treatment

of choice in all cases of carbon-monoxid poisoning. In mild cases, recovery appears to be more rapid, and there are fewer after effects, such as headache. In the more severe cases the results have been equally good. In cases in which respiration has ceased, this method can be applied in conjunction with prone-pressure artificial respiration.

There are several mechanical devices on the market which deliver this gas mixture to the patient very successfully indeed. They seem to meet the objections which have always been raised against devices of the pulmotor or lungmotor types.—*May R. Mayers, M.A., M.D.,* in the *Industrial Hygiene Bulletin,* New York State Department of Labor.

Fatal Case of Lead Poisoning Due to Faulty Personal Hygiene.—Lead poisoning is usually either industrial or accidental. The records of a babies' hospital reveal this unusual and fatal case of plumbism in an infant which, although accidental, was the result of faulty personal hygiene on the part of a workman handling paint containing lead.

A baby, sixteen months old, was admitted for treatment with the following symptoms: vomiting, diarrhea, general lassitude and weakness, and a slight fever. Blood examination showed stippling and nucleated red cells. The child died and an autopsy was performed. The chemical analysis of the brain and liver showed the presence of lead and a green aniline dye.

An investigation as to the source of the lead brought out the following facts: The child's father was employed as a painter. It was his custom to come home to lunch without changing his work clothes which were often smeared with fresh paint. He was in the habit of playing with and fondling his child, as any parent is apt to do. As a result, the child's clothing was frequently smeared with paint. The mother stated that on several occasions, during the six months preceding the child's admission to the hospital, she had to wash paint from his clothes. As in common with children, the baby, no doubt, put his clothes in his mouth, and in this way ingested the lead.

The reason for citing this case is obvious, and brings out the fact that personal cleanliness is one of the most important factors to be taken into consideration in regard to the prevention of lead poisoning. Also, that personal cleanliness on the part of those handling lead or other poisons is not only a protection to themselves but also to others, including their families.—*Thos. J. O'Brien, M.D.,* Medical Inspector, in *Industrial Hygiene Bulletin,* New York State Department of Labor.

Safety Measures as a Health Hazard.—Protection from dust, fumes, gases, and vapors is accomplished by exhaust systems or respirators. "What is potent for good is powerful for evil," so care must be exercised in installing such safety devices. Attention has been directed to the health hazard incidental to installation of improper foods. Thought must now be given to the efficacy of respirators. Respirators should preferably be of a type easily cleaned and sterilized; otherwise they may be a liability instead of an asset.

Respirators should be assigned for individual use and not for common use; otherwise there is the danger of communicable diseases which would be more grave than the industrial disease. Again, the filter contained within the respirator, whether it be of gauze or sponge, should be cleaned or renewed frequently. Consisting as it does of organic matter and exposed to moisture and saliva, it becomes an excellent germ incubator.

Respirators should not be hung on the wall or left exposed to become a dust trap. When not in use they should be placed in a dust-proof container; otherwise the respirator becomes a dust menace.

It is obvious, then, that we have here a subject deserving attention from the student and worker in the field of industrial hygiene; otherwise we have a safety measure which becomes a health hazard.—*C. T. Graham-Rogers, M.D.,* in the *Industrial Hygiene Bulletin,* New York State Department of Labor.

Physical Defects as Revealed by Periodic Health Examinations.—*L. I. Dublin, E. L. Fisk, and E. W. Kopf,* in the *American Journal of the Medical Sciences* for October, 1925, state: From the physical examinations of more than 16,000 white males, it is clear that a wider extension of periodic health examinations among the adult population is indicated. Prompt treatment of both major and minor defects thus discovered may lead to the prevention of serious complications later. The most helpful prospect is in the field of weight control. Marked overweight is associated with serious impairment of cardiovascular function according to these figures. This study suggests that there are traces of important connection between premonitory conditions and the later and graver disabling disorders. The facts gathered on hygienic habits indicate the need for greater hygienic instruction. These investigations offer great aid in the field of preventive medicine.—B. L. G. in *Industrial Hygiene.*

Pallor in Lead Workers.—In her investigation of 381 lead workers in the State of New York, Dr. May R. Mayers, of the Bureau of Industrial Hygiene, New York State Department of Labor, found that there was no constant relationship between pallor and a lowering of the hemoglobin content of the blood. Indeed, some of the most marked cases of pallor were found associated with hemoglobins of 90 to 100 per cent. On the other hand, cases of relatively low hemoglobin, often combined with moderate intoxication were not always found to be associated with any great degree of pallor. The following table shows an analysis of the hemoglobin distribution, and the relation between hemoglobin and pallor in 378 cases.

Hemoglobin Per cent	*No. Cases Showing Pallor*	*No. Cases Showing No Pallor*	*Total*
45-50	1	1	2
51-55	3	1	4
56-60	4	5	9
61-65	4	5	9
66-70	12	36	48
71-75	19	43	62
76-80	17	108	125
81-85	11	39	50
86-90	6	46	52
91-100	2	15	17
Total	79	299	378

This lack of a necessary relationship between pallor and a reduction in the hemoglobin in these workers is of considerable interest from the standpoint, particularly, of the industrial physician. For he so often depends upon pallor alone as a guide to whether a particular worker should be transferred to another part of the plant for purposes of recuperation or not.

The present findings are quite in accord with those of previous investigators. Authorities agree that marked intoxication may occur in the absence of pallor, and that, vice versa, it may be very marked in very mild cases. Koelsch believes that pallor in lead workers is probably due to the action of lead upon the skin capillarics, causing a vasoconstriction due to faulty nerve mechanism.

THE MEDICAL SOCIETY

OF THE STATE OF PENNSYLVANIA

OFFICERS' DEPARTMENT

WALTER F. DONALDSON, M.D.
Secretary
8062 Jenkins Arcade Building
Pittsburgh, Pa.

PAYMENT OF PER-CAPITA ASSESSMENT

The following payment of per-capita assessment has been received since October 21. Figures in the first column indicate county society numbers; second column, State Society numbers:

For 1926

Oct. 21	Venango	53	7511	$2.50
	Northampton	137-138	7512-7513	10.00
22	Berks	133	7514	2.50
30	Philadelphia	2076-2083	7515-7522	35.00
Nov. 5	Snyder	7-8	7523-7524	10.00
	Luzerne	279-280	7525-7526	10.00
	Blair	95	7527	5.00
	Schuylkill	143-144	7528-7529	10.00
	Luzerne	275-278	7530-7533	20.00
	Allegheny	1273-1279	7534-7540	17.50
22	Lycoming	108-110	7541-7543	7.50
23	Philadelphia	2084-2099	7544-7559	57.50
24	Bucks	70	7560	5.00
	Washington	132	7561	2.50
	Luzerne	279	7562	5.00
	Delaware	104-106	7563-7565	7.50
	Allegheny	1280-1283	7566-7569	12.50
For 1927				
Nov. 1	Montour	1	1	5.00
	Lancaster	1-3	2-4	15.00

CHANGES IN MEMBERSHIP OF COUNTY SOCIETIES

The following changes have been reported to November 15:

ALLEGHENY: *New Members*—Kenneth D. Eskey, Jenkins Arcade, Samuel Grekin, 1533 Center Ave., Pittsburgh; S. B. Butrym, 510 Atlantic Ave., McKeesport; George A. McCracken, Woodville. *Reinstated Member*—George W. Beane, 748 Chartiers Ave., McKees Rocks. *Resignation*—A. Howard Aber, Florida, formerly of Dravosburg; Rea P. McGee, Hollywood, Calif. *Removal*—Milton E. Lowell from Sharpsburg to 434 Summit Ave., Westfield, N. J.; James A. Hamma, from Carnegie to Camp Hill (Cumb. Co.). *Deaths*—Robert Patterson, Turtle Creek (Univ. of Pgh. '13), Sept. 30, aged 43; George S. Schoyer, Pittsburgh (Georgetown Univ. '10), Oct. 2, aged 47; Herbert L. Jones, Pittsburgh (Univ. of Pgh. '07), Oct. 24, aged 44; Robert W. Allison, Wilkinsburg (Jeff. Med. Coll. '86), Oct. 27, aged 66.

BEAVER: *Death*—John B. Ague, Beaver Falls (Bellevue Hos. Med. Coll. '89), Oct. 21.

BUCKS: *New Member*—Claude L. Taylor, 117 E. Oakland Ave., Doylestown.

CARBON: *Death*—Edwin H. Kistler, Lansford (Univ. of Penna. '70), Sept. 30, aged 83.

CHESTER: *Death*—B. Harry Warren, West Chester (Jeff. Med. Coll. '84), Oct. 11.

CLARION: *Transfer*—Harry C. Blair, East Brady, from Mercer County Society.

CRAWFORD: *Transfer*—Daken W. Cunningham, Meadville, from Fayette County Society.

DELAWARE: *New Members*—Francis V. Bielski, 610 E. 9th St., Ignatius J. Stankus, 2630 W. 4th St., Chester; Jacob L. Engle, School Lane and Edmonds Ave., Drexel Hill.

LACKAWANNA: *Death*—Daniel A. Webb, Scranton (Georgetown Univ. '96), Sept. 26, aged 55.

LANCASTER: *New Members*—James W. Keath, Ephrata; Samuel W. McNeal, Columbia; Silvester Ulrich, Elizabethtown.

LUZERNE: *Reinstated Member*—Lawrence F. Corrigan, 336 Broad St., Hazleton.

LYCOMING: *New Members*—Clayton B. Mather, 406 W. Southern Ave., Mary E. Heller, 775 Glenwood Ave., Williamsport; Edwin M. Bell, Devitt's Camp, Allenwood. *Transfer*—Charles F. Seaton, Williamsport, from Westmoreland County Society. *Removal*—Arthur D. Van Dyke from Williamsport to 1527 Clay Ave., Scranton (Lackawanna Co.).

MONTGOMERY: *Death*—Clarence T. Faries, Narberth (Med. Chir. Coll., Phila. '95), Oct. 12, aged 56.

MONTOUR: *New Member*—Francis B. Hitchcock, Lewisburg (Union Co.).

PHILADELPHIA: *New Members*—Herbert J. Baldwin, 1600 N. 15th St., Leonard D. Frescoln, 411 S. 44th St., Jacob Golove, 6701 Elmwood Ave., John C. Humphreys, 251 W. Rittenhouse St., Gtn., Edward W. Pangburn, 2936 Decatur St., Bruce L. Fleming, 421 S. Carlisle St., David S. O'Donnell, 330 N. 52d St., Samuel J. Goldberg, 5759 Pine St., Stuart Mudd, Phipps Inst., 7th and Lombard Sts., Philadelphia. *Reinstated Members*—Joseph C. Kahan, 1520 N. 7th St., Francis C. O'Neill, 1725 Ritner St., Karl J. Kurz, 7111 Chew St., Mt. Airy, Arthur E. S. Casey, 5915 Cedar Ave., William F. Donnelly, 616 N. 53d St., H. W. Miller, 200 N. 52d St., E. H. Siter, 512 Medical Arts Bldg., Philadelphia. *Resignation*—Lorne E. Hastings, Upper Darby (removed to Michigan); Lawrence Simcox, Tampa, Fla. *Removal*—M. Edward Smoczynski from Frankford to Mt. Carmel (Northumb. Co.). *Death*—William K. Shea, Philadelphia, Sept. 18.

VENANGO: *Removal*—Burton A. Black from Polk to Grove City (Mercer Co.).

WASHINGTON: *New Member*—Arthur A. Paluso, 450 Fallowfield Ave., Charleroi.

YORK: *Death*—Francis J. Snyder, York (Coll. Phys & Surg., Balt., '87), Oct. 11, aged 62.

COMMISSION ON COMPENSATION LAWS

LEVER F. STEWART, *Chairman*
Clearfield, Pa.

COUNTY COMMITTEES ON COMPENSATION LAWS

Since this year's Philadelphia session of the State Society at which the recommendations of the Commission on Compensation Laws were adopted by the House of Delegates, the Commission has bent every effort toward accomplishing the changes so essential to the welfare of injured men. The recommendations of the Commission have favored the doctor and the hospital only in so far as they might be paid for work that rehabilitates injured men and hastens their return to their former occupations. The Commission has attempted to take a sane position through which care of the injured man is given first consideration. Practical analysis will show that the recommendations made are of value not alone to the injured man but to the employer and to our Commonwealth. The Commission has advanced recommendations for changes that are based on the principles of salvage that are applied to any business. Whether it is realized or not, these recommendations mean more complete return to normal of the injured man (and this is the physician's duty), less expense to the employer, increased efficiency in work, and less expense to the State.

With the thought of placing our aims before the constituent societies, pamphlets covering the pros and cons of the problem are being prepared for distribution to the various county societies. The Commission is requesting each county society president to appoint a special legislative committee covering the subject of workmen's compensation. Letters giving the details of this plan will shortly go forward to every county society. The desire is to place this work fairly before the county societies well in advance of the next session of our Legislature, when, it is understood, there will be hearings covering changes in the compensation law.

After all, no men among us need refreshment and renovation more frequently than those who occupy positions in our schools of learning; upon none does intellectual staleness more surely steal "with velvet step, unheeded, softly," but not less relentlessly. Dogmatic to a greater or less degree all successful teaching must be, but year by year, unless watchful, this very dogmatism may react upon the teacher who finds it so much easier to say today what he said last year. After a decade, he may find it less trouble to draw on home supplies than to go into the open market for wares, perhaps not a whit better, but just a wee bit fresher. After twenty years, the new, even when true, startles, too often repels; after thirty, well, he may be out of the race, still on the track perhaps, even running hard, but quite unconscious that the colts have long passed the winning post.—From *The Life of Sir William Osler*, by Harvey Cushing.

County Society Reports

BERKS—OCTOBER-NOVEMBER

The October meeting of the Society was held on the 19th, and was addressed by Dr. E. L. Eliason, of Philadelphia, on "Clinical Surgery of the Gall Bladder."

Dr. Eliason: The question of when to do a cholecystotomy or a cholycystectomy has not been settled. The existent pathology influences the decision. Gall stones are five times as common in males as in females, the significance of which is not understood. There are metabolic nervous disturbances back of the gall stones. Frequently gall stones are found in pregnancy, in which cases the stones will be new, easily crushed, and not faceted. After several pregnancies the stones will be harder, faceted, and infected. Pressure on the gall bladder will cause absorption of bile, obstruction, then formation of stones, then various associated diseases due to infection. Many gall-bladder diseases occur earlier in life than was formerly supposed.

Factors influencing surgical procedure are metabolism, calculus, infection, early diagnosis, and indigestion. Persistent indigestion associated with a daily routine means a surgical condition. In simple gall-bladder disease without complications, operation can be done under local anesthesia, using one-half to 1-per-cent novocain. After incision, strike the rectus muscle, then the linea transversæ. If novocain is injected into the rectus muscle, the pain will be relieved. Stones are frequently overlooked. Recent stones are yellow, unfaceted, and soft.

The ideal conditions for cholecystectomy are youth, early diagnosis, at the pre-infection stage, and presence of a single stone or nonfaceted stone. The conditions for doing a cholecystotomy are: jaundice, pancreatitis, lung and heart disease, and inability to do a cholecystectomy. Symptoms recur in 10 per cent of the cases in which biliary surgery is done. Surgeons in general have a mortality approaching 10 per cent in cases of cholecystectomy, and in cholecystotomy 3 to 5 per cent.

At the November meeting Dr. Ross V. Patterson, of Philadelphia, addressed the Society on "The Essentials of Cardiac Diagnosis and Treatment."

Dr. Patterson: Of late there has been a change in the conception of cardiac disorders and treatment of the cardiac problem. In an endeavor to formulate a correct estimate of the disorder and its effect, it is necessary to consider it from four viewpoints—etiologic, anatomic, mechanical, and functional. The old conception of the disease was largely anatomic, while the functional viewpoint is the more recent one. In the etiology it should be ascertained if the trouble is due to scarlet fever, rheumatic, syphilitic, or other infection. If rheumatic, it is liable to recur unless obviated by a change in the mode of living. If due to syphilis, it requires specific treatment. If subsequent to infection from teeth, tonsils, or appendages of the alimentary tract, the primary focus should be removed.

Anatomic conditions are important to the extent to which they impair function. Anatomic lesions are liable to result in pericardial lesions and to affect the valves and the elasticity of the arteries and cause sclerosis. The narrowest conception of cardiopathy is to determine it by the presence of murmurs. Pericarditis is the most serious form of heart trouble in childhood. If the arteries are diseased, increased resistance in the peripheral arteries is caused, resulting in increased blood pressure. A large heart with low blood pressure is often present in disease of the myocardium. Most cardiac affections can be recognized without the use of

graphic instruments. There has been a tendency to over-estimate the value of these instruments.

Those cases having a high diastolic pressure usually are short-lived. The best practical test is the functional test, and the best way to ascertain the damage to the heart is to inquire into the patient's activities. Impaired compensation leaves a margin between the heart and its lesions. The importance of functional impairment with due regard to the anatomic background was emphasized. A murmur is the least valuable of prognostic and therapeutic signs. The patient's activities should early be limited to those within his cardiac powers. The heart failure is expressed by the disproportion between the effort and the power of the heart. Undue fatigue, edema, palpitation, vertigo, and dyspnea are dangerous symptoms. Digitalis is a drug to be used after the cardiac load has been reduced.

Clara Shetter-Keiser, M.D., Reporter.

LUZERNE—OCTOBER-NOVEMBER

The second regular meeting of October was held on the 20th in the Society building, President P. P. Mayock in the chair. Dr. Lawrence F. Corrigan was elected to membership. Resolutions were passed on the death of Dr. George Harrington of Hazleton. Dr. Mary Riggs Noble, Chief of the Pre-School Section of the State Department of Health, spoke on "Child Health." Dr. C. Hayden Phillips, of Wilkes-Barre, read an interesting paper describing some of his experiences and observations while abroad this last summer pursuing graduate study in pediatrics.

Dr. Phillips: In Liverpool, the Children's Hospital of Myrtle Street is the largest and best equipped, and yet there is no effort at isolation in the wards and the work is handicapped by lack of equipment. I have seen wards with only one thermometer in use in the whole ward. None of the hospitals in England receive state aid and they are placarded with huge signs informing the public of their debt and the amount of money which is required to carry on. The amount of material in the hospitals is enormous, and the attending physicians devote much more time to their services than is apparently customary in this country.

The convalescent homes in connection with the children's hospitals of Liverpool are admirable. They have been built with due consideration to climate and location, and one side of most wards is capable of being thrown wide open. They are well staffed with trained nurses and teachers. The grounds are beautiful, and the children are given every advantage of fresh air and sunshine, proper feeding, and medical care. In addition, they are graded into classes suitable to their advancement in school, and are taught by teachers especially trained for this work. At the convalescent home at Hampstead, the nurses paid the equivalent of $300 a year for the privilege of training, and there was not a maid or scrub woman in the place, the cooking, cleaning, and nursing done entirely by these nurses. The institution was immaculately clean and tidy, and the children were perfectly cared for. The Truby King Hospital on the outskirts of London is another hospital ideally run.

At the Great Ormond Street Children's Hospital in London, the waiting rooms in the out-patient departments could easily seat 1,000. The number of out-patients is almost 300,000 a year, including about 50,000 new cases. The wards are large and airy, but not particularly attractive, and the corridors are very dark and gloomy. The hospital receives nothing but voluntary contributions, and has a very limited nursing staff; yet it continues to do a vast amount of good, though devoting little time to prevention and prophylaxis.

In Vienna a very well organized but poorly managed course of instruction is given in a most thorough manner. The "poorly managed" refers to the American Medical Association of Vienna, under whose auspices the courses are organized. It requires a particular aggressiveness in the pursuance of courses to avoid wasting time in Vienna. The courses are limited to five or ten men, and are given in a very intensive and concentrated manner. Each subject in the general sphere of pediatrics, for instance, is treated by one man. The teachers receive about five dollars per hour, sometimes more. At first I felt this was expensive and the whole thing commercialized until I came to learn the pay that these men were getting and realized that they were devoting all their time to the hospital and to the study of diseases of children at a salary that in this country would almost make a laborer snicker. The fees from graduate teaching, then, represent a large part of their incomes. The men seem to put more into their teaching than instructors in our country and in England. This fact, combined with the facilities and material, makes Vienna a real center of medical teaching. No examination is omitted because of consideration for the patient. I have seen children carried from the ward to a clinic with the high temperature of scarlet fever, erysipelas, measles, and so forth, with little thought of contagion. While I was there the diabetic ward contained forty-one children, all doing wonderfully well and very happy, the older ones being taught to give themselves the hypodermic of insulin. The tuberculous are cared for in a ward on the roof. This last summer the incidence of tuberculosis in the inmates of the hospital was about 60 per cent, but it has run as high as 85 per cent. The contagious and infectious diseases are cared for in glass cubicles with the strictest care used by the nurses and doctors. Why these cases are carried openly into the clinic, I do not know.

The meeting of November 3d was held in the Society building, President P. P. Mayock in the chair. Miss Margaret Byrn, physical director at the Wilkes-Barre Y. W. C. A., addressed the Society in an appeal for coöperation between the physicians and the physical-education department of the Y. W. C. A. She described her previous work in Chicago, where classes of defectives were organized and deformities corrected by systematic exercise and training. Scoliosis, lordosis, and kyphosis sometimes lend themselves to exercises and training of the muscles. The swimming-pool with water heated to 80° offers the best means of muscular exercise in heart cases. Miss Byrn offered the splendid facilities of the local Y. W. C. A. with its gymnasium and swimming-pool, with the suggestion that physicians refer suitable cases for graded exercises and reëducation, suggesting that classes would be made up based on the deformity or derangement present and the individual need of the patient for exercise, under control and supervision of the physician.

Dr. Thomas R. Gagion, of Pittston, read the essay of the evening on "Nasal Discharges in Childhood."

Dr. Gagion: In the newborn, the first great etiologic factor in nasal discharge is syphilis. The nasal symptoms may not make their appearance until some two or three weeks after birth. The discharge is rather of a mucous character, moderately profuse, and it has been observed that with its advent the skin and mucous-membrane lesions appear. Another factor is rhinitis due to infection of the nose of the newborn by bacteria present in the birth canal. It makes its appearance

on the second or third day, and is profuse, mucopurulent, with a foul odor.

Nasal discharge may accompany congenital occlusion of the choanæ. It may be caused by hypertrophied adenoids. A little later in life, foreign bodies in the nose may cause discharge. The first symptoms are the nasal discharge and impaired nasal breathing. These objects may be wedged well up in the middle meatus between the middle turbinate and the septum, and, unless carefully looked for, will escape detection. The thick, rather grayish, tenacious membranous discharge of nasal diphtheria, not the acute but the chronic, is sometimes overlooked. When wiped away, the discharge is found to be very "sticky" and is wont to leave a slightly bleeding area of mucous membrane. The diagnosis is made positive by culture, and the culture is best made by taking material from the ulcerated area beneath the exudate.

Recently our attention has been called by Dean and his associates, of Iowa, to the nasal symptoms of the deficiency diseases. They are usually nasal blocking and a moderate discharge of clear nasal mucus. Here the discharge is due to diet deficient in vitamins. The child with nasal discharge may have an underlying sinusitis. The sinuses should be carefully examined when there is a history of successive head colds or in the presence of unexplained fever in children.

Cerebrospinal fluid escaping through a deficiency in the cribriform plate may occur in children, but is rare. This fluid contains sugar but no mucin, which distinguishes it from nasal mucus.

Nasal deformities resulting from faulty development or external trauma are still another cause of discharge. In the event of recent trauma in the young child, an effort should be made to correct any recent deviation in the septum, and thus prevent future permanent irregularity.

Dr. Schappert: I have removed adenoids at 6 months of age without an anesthetic, but not any younger. In doing this, one should use a very small infant's adenoid curet. In malnutrition Dr. Shirley uses a mixture of carrots and some other vegetables, also cod-liver oil. Very little can be done toward correcting deformities of the septum in children. One thing that can be done to improve breathing space and drainage is the refraction of the turbinates after tonsilloadenoidectomy. With the adenoids having acted as an obstruction to the breathing for years, there is very naturally some narrowing of the nose by overgrowth of the turbinates. These should be refracted after the adenoids have been removed, using the Kyle instrument.

In treatment every one has his pet theories. The correction of septal deformities is questionable in children. I do not care to do a submucous resection on any one less than 15 years of age. The turbinates should not be removed unless really necessary, because of the danger of atrophic rhinitis later. I have not seen a true rhinorrhea due to cerebrospinal fluid, though some years ago I had a young woman, the daughter of a physician, who had a constant dripping of clear fluid from the nose. I removed her nasal septum without improvement. Then we took out her tonsils, more to build up her condition, and in due course the rhinorrhea ceased.

So many surgeons depend on the La Force adenotome alone. At a recent meeting, it was emphasized that this is insufficient. This instrument cuts a central furrow in the adenoid mass, and in addition to it one should always use a curet to remove the lateral masses.

Dr. E. U. Buckman: The question of foreign bodies in the nose, especially in young children, is interesting, in that there is always a one-sided discharge. Some years ago I had a patient who was different. She was a young woman who complained of headache. I removed what looked like an orange or lemon seed from high in the nose. This had been in the nose so long that she did not remember when she had jammed it up there. It had been there probably 15 to 18 years. I was interested in Dr. Gagion's statement as to the need for careful examination of children for deviated septum, and that much could be done if this was found. What would he propose to do in those cases?

Dr. L. T. Buckman: We might add to Dr. Gagion's list, neoplasms of the nasopharynx as causes of nasal discharges. A tumor of the nasopharynx might cause discharge before it became large enough to produce obstruction. When large enough, it certainly produces discharge, and becomes evident by its obstructive symptoms.

Dr. Connole: Taking care of nasal discharge is most important in treating eye diseases in children. Phlyctenular diseases of the eye in childhood very often are caused by those conditions which produce nasal discharge.

Dr. Gagion, in closing: I agree that you cannot do a submucous resection on the young person. However, I do believe that in youngsters who fall on the nose, we can do something with an intranasal splint. I observed the practice this summer of a man in New York State who follows this technic in cases of caved-in nose after a flattening blow: He dilates with a Kyle or Freedman forceps, and lifts up the bridge of the nose. With a wooden introducer, he introduces a molded gold wire splint, leaving it in three to six weeks. The splint is made of 10-gauge gold wire, is open, and allows treatment and lavage of the nose. I observed one such case treated very soon after injury, and I saw him remove the splints from youngsters under light cocain spray after the splints had been in some weeks. Apparently they had worn them without discomfort.

We all realize that the removal of adenoids is not always perfect. Even when we are sure we have removed the tonsils properly, we do not get a perfectly clean job every time. This is in the easily accessible tonsillar fossæ, and how much more likely is recurrence in the postnasal fossa which is so much more difficult to reach.

The regular meeting of November 17 was held in the Society building, President P. P. Mayock in the chair. Dr. Harold G. Guyler, of Wilkes-Barre, and Dr. William R. Sulman, of Hazleton, were elected to membership. Dr. J. Torrance Rugh, of Philadelphia, who has conducted clinics in Wilkes-Barre during the last two years in the work of the Crippled Children's Association, was the essayist of the evening. Dr. Rugh spoke on "Painful Feet; Their Problems and Correction."

Dr. Rugh: The problems of orthopedics, including the problems of the human foot, are mechanical. Disturbances of function of the foot which lead to painful symptoms are the result usually of strain. In the search for the cause of such strain, it becomes necessary to examine the foot. In the examination of the foot one of the first things to observe is the heel tendon, the tendo achillis. With the knee extended and the leg straight, it should be possible to dorsiflex the foot at the ankle 10 to 20 degrees beyond the right angle. If the foot can not be dorsiflexed beyond the right angle, the heel tendon is too short and every step will pull on the shortened tendon and cause strain and in turn cause pain. I correct this temporarily by

raising the heel of the shoe, which relieves the strain. The tendon cannot be lengthened, but the muscles can. We do this by flexing the leg on the thigh to relax the attachments of the calf muscles to the femur and fixing the leg and foot in that position by plaster. The patient is then obliged to bear his weight on the splinted leg, gradually cutting away the cast and stretching the muscle until at the end of three weeks the muscle is usually stretched and the heel tendon given the desired play, with complete relief of the foot strain.

The second point to observe in the examination of the foot is the inner line of the foot. If there is an in-flare along the internal line it may be due to hypertrophy of the parts or to a supernumerary bone over the scaphoid. These are differentiated by roentgen-ray examination, and either one may cause painful feet.

The third point is the examination of the shoe. The shoe may be worn all along one side of the sole, and the foot may be relieved by putting a strip of leather along that side to lift it. There are three points to observe in the fitting of shoes: The heel of the foot should rest in the heel of the shoe. The shank of the shoe should fit under the arch of the foot. The heads of the metatarsal bones should rest on the seat of the shoe. On every shoe, the inner line of the sole flares in from the toes to curve under the shank. The point at which this break occurs is one end of a straight line passing across the sole which marks the seat of the shoe. The heads of the metatarsals should rest on this line. If they rest forward of the seat of the shoe, then that shoe is too short. Eighty-five per cent of the shoes being worn today are too short. The shape of the toe, the width or the length of the toe, have no importance in determining the fitness of the shoe. If the shoe is long enough, it is fit enough. A shoe that is too short leads to foot strain, and this is the most potent factor in the production of foot pain.

Another factor in the production of foot pain is the flat foot. This is greatly overestimated by the layman, by the so-called "foot experts" of the shoe stores, and by the man who sells arch supporters. I suppose I see three cases of true flat foot a year. Many feet accused of being flat are in reality only weak. Because the imprint of a bare foot on a flat surface does not show the indentation of the arch, it does not follow that that foot is flat. Such a foot may be perfectly natural to that person. Meyer's line is a straight line from the center of the heel passing forward along the sole to a point between the second and third toes. This should be in the center of the sole. It may be to one side or the other. If it is, and it is still straight, that foot is a weak foot. If Meyer's line is curved, it belongs to a flat foot. That is the difference. The treatment of such a foot is to build the heel forward under the inner side of the arch to support the shank of the foot. It is not treated by arch supporters.

Corns and warts may cause painful feet. Corns usually appear on the dorsum of the foot or toe. A wart usually appears on the sole. Corns may also appear on the sole. A wart is sharply circumscribed, and when the upper layers are removed, the bleeding papillæ are exposed beneath. A corn is not so sharply circumscribed, and the upper layers may be peeled off, leaving a smooth depression. The treatment of warts is a single exposure to a therapeutic dosage of the roentgen ray. The treatment of corns is properly fitted shoes, which will cause the immediate spontaneous disappearance of the corn, and will prevent the further growth or development of a bunion, but will not correct bony changes that may have occurred beneath the bunion.

Morton's disease is the common name ascribed to that affection marked by intense sudden pain due to pinching of a nerve, usually between the fourth and fifth metatarsal bones. It is relieved by a transverse pad worn in the shoe just back of the heads of the metatarsal bones, lifting the anterior arch of the foot, and so removing pressure exerted on structures between the metatarsals. Contracted tendons leading to hammer toes may be the cause of foot pains, and relief is prompt by tenotomy.

In answer to questions, Dr. Rugh stated that pruritus of the foot is usually due to circulatory changes accompanied by excessive perspiration of the feet, which is caused by poorly fitting shoes or socks. Treatment consists in properly fitting shoes and socks, and in bathing, with the use of astringent powders.

LEWIS T. BUCKMAN, M.D., Reporter.

LYCOMING—NOVEMBER

The November meeting was featured by the fall clinic held at the Williamsport Hospital and conducted by Thomas McCrea, M.D., of Philadelphia. Patients selected for the clinic were principally those showing various forms of heart disease. At the close of the clinic, the physicians assembled at the Park Hotel for a dinner, following which Dr. McCrea discussed "The Problems of Rheumatic Fever." The points emphasized were as follows:

Rheumatic fever is an acute infectious disease of specific type produced by a number of organisms, not an ordinary streptococcic infection. It tends to attack the myocardium, causing a specific anatomic lesion. Rheumatic fever may be thought of in terms of heart muscle. We do not have an essential knowledge of its cause. It affects mostly the middle class, and is influenced by dampness and local and focal infections. Diseased tonsils are a factor. There have not been too many tonsils removed. The treatment should be devoted primarily to the prevention of heart damage. The disease in children is different from that in adults. In children the joint trouble is secondary to the heart trouble, and is associated with dilatation. There may not be much fever, but damage goes on. The damage to the myocardium is more serious than lesions of the endocardium.

What to do? Rest in bed until well, three to six months. This is the only way to prevent endocarditis. Remove the original infection. In adults there is less danger to the heart. Gonococci should always be considered. Arthritis deformans may be acute if of streptococcic origin. Early attention and treatment should be given, and the heart muscles should be watched. Salicylates are useful in large doses. Rectal administration is recommended.

Dr. C. E. Ervin, of Danville, opened the discussion. He would not allow a patient to have more than one attack of tonsillitis. He also emphasized dental infections.

Dr. M. L. Raemore, of Williamsport, exhibited many and various radiographs showing different types of fractures, necroses, and osteomyelitis.

The clinic and subsequent meeting were among the most practical and interesting meetings held this year. The meeting was attended by physicians from Danville, Lock Haven, Mansfield, Blossburg, Bloomsburg, Lewisburg, Spring Mills, and Liberty.

During the past three months the following were added to the membership: Clayton Black Mather (Jef-

ferson Medical College, 1925); Mary Elizabeth Heller (University of Pennsylvania. 1925); Edwin Massie Bell (University of Pennsylvania, 1922), now located at Devitt's Camp; Charles F. Seaton (by transfer from Westmoreland County); and Ruth S. Kull (Woman's Medical College, 1925).

W. F. KUNKLE, M.D., Reporter.

MERCER—OCTOBER

The Society met at the Sharon Country Club, Sharon, on Thursday evening, October 7. There were twenty-six members present and three guests. After the business meeting, Dr. George Hartman, pathologist at Buhl Hospital, read a paper on "The Relation of the Clinical Laboratory to the Clinician."

Dr. Hartman: A clinical laboratory is not primarily a diagnostic institution; that is, it is not an institution in which the main object is to make diagnosis by means of specimens. The main object is to discover facts. The next most important object is to help the physician, when need be, fit the facts together with the other clinical facts he has discovered. Laboratory findings must be considered only as additional clinical symptoms, and be used only to assist in establishing or excluding a diagnosis. A single negative examination of any specimen is of very little value, especially if the clinical symptoms do not agree with it. Even a positive result must be supported by clinical evidence. Consider some of the common smear examinations, as for example, for gonococci, tubercle bacilli, etc. A negative report means that nothing was found, in the very small portion of the secretion put on the slide, which resembles the organism looked for. A positive report on a smear is not positive—it is probable. Animal inoculation or cultural experiments are necessary for proof, but these are time consuming and expensive, so are usually considered unnecessary. The clinician wants speedy help, as speedy as reasonable accuracy will permit. Rapid laboratory evidence (not proof) plus clinical history is usually all that is required.

In the study of pathologic histology very often the facts discovered in the laboratory are sufficient to warrant a diagnosis, but even here the pathologist needs all the aid he can get through the history and other clinical data. Only after a wide experience can he be safe in deciding the boundary disputes between inflammatory hyperplasia and sarcoma, epithelial overgrowth and epithelioma, adenoma and carcinoma, lymphoma and lymphosarcoma, etc. As to the interpretation of laboratory findings in syphilis, only after a careful history of the case, together with an exhaustive study of the relation of the Wassermann to the various phases of syphilis can a correct valuation be placed on the laboratory reports in the study of this disease.

While it is very important that urinalysis should always be done, it is necessary to give it the proper interpretation. However, it is no longer necessary to rely on these simple tests, for we have available in blood-chemical studies a very valuable check on the urinary findings. Any insufficiency of the kidneys will be evident in an accumulation of the nitrogenous waste products in the blood. Here, too, proper care must be used in the evaluation of the results. Blood-sugar estimations have shown that glycosuria is not always found in diabetes, and neither does sugar in the urine necessarily mean diabetes. The only safe check on treated cases of diabetes is an occasional blood-sugar study—either a single estimation or a blood-sugar-tolerance determination, as the case may require. It has the same value as basal metabolic studies in treated cases of exophthalmic goiter.

Decide which tests you are going to do in your office and which ones you will have done in a laboratory, then choose a reliable laboratory, learn its methods and personnel, and have all tests made at the place to whose technic you have become accustomed.

Dr. John McKay, pathologist at the Mercer Sanitarium, Mercer, opened the discussion.

Dr. McKay: There is no sharp line between the laboratory tests and the clinical tests. The Wassermann is a test for certain fatty substances in the blood. It may be positive in other diseases than syphilis. It is the same old story with albumin in the urine. It does not mean nephritis. A positive culture of diphtheria does not mean diphtheria. The patient may be a carrier. It is up to the doctor with his clinical experience to make the diagnosis.

A buffet luncheon followed, after which the meeting adjourned.

EDITH MACBRIDE, M.D., Secretary.

PHILADELPHIA

November 10, 1926

SYMPOSIUM ON GOITER

Dr. Henry S. Plummer, Mayo Clinic, Rochester, Minn. (by invitation): Exophthalmic Goiter and Hyperfunctioning Adenomatous Goiter.—This paper deals with the physiologic side of the goiter problem. In the literature on goiter there has been built up a more exact knowledge of the physiology of the thyroid than of any other organ of the body. Because of the great volume of writing, much of it is stuffed with inaccurate quotations from the work of productive men, and also because of much disagreement on the subject, it is hard for the average man to follow through. There are two entities under which all goiter should be grouped: (1) endemic or simple goiter and (2) exophthalmic goiter. Through the work of Wilson, McCarthy, and Broder, a classification has been worked out and the following is a tabulation of the pathology of one thousand cases so grouped:

I. Diffuse colloid .....6-10 cases
II. Diffuse hypertrophic and hyperplastic goiter .....900-925 cases
III. Acinar hyperplasia .....80-90 cases
a. Adenoma (pericentral, encapsulated).
b. Regeneration (new follicles in gland from epithelium of follicles of the diffuse colloid goiter).
c. Adenomatous (new follicles from interfollicular cells).

All goiter is based on these three changes, colloid, hypertrophy, and increase in adenomatous tissue. Endemic and exophthalmic goiter are both hypertrophic in the beginning. First, there is a diffuse hypertrophy, then an increase in the number of cells, then regression. The degree of intensity of the clinical findings corresponds very nearly to the pathologic process. There are two different sets of symptoms on which to base the degree: (1) the nervous complex, usually with exophthalmus; (2) the cardiovascular complex, with elevation of the basal metabolic rate. By consideration of these it is possible to differentiate true exophthalmic goiter from an adenomatous goiter which causes exophthalmus, yet at operation 2 per cent of the thousand cases diagnosed exophthalmic goiter fell into groups I and III (diffuse colloid and acinar hyperplasia). At the time the gland was removed, it is probable that they had not the complex, but they had had it and were still hyperthyroid.

What is exophthalmic goiter? It is stimulation of the gland above the needs of the organism for an abnormal length of time and by an abnormally hard stimulus. Why it is stimulated is not known. We know that it runs in families, we know that prolonged nervous strain makes good soil for it, but these cannot be made the essential cause. The hyperthyroid state evidences two sets of symptoms—cardiovascular and nervous. A third group, the eye symptoms, may be added, but these result from the prolonged action of the same product of the gland which makes the nervous phenomena.

From 1909 to 1914 Dr. Plummer attempted to analyze the symptoms on a hypothetical physiologic basis, and at the end of that time reached the conclusion that the cardiovascular group arose merely from the elevation of the basal metabolism. The active agent of the thyroid gland is present in all the cells of the organism, but different tissues have specific reactions to it. This agent determines the quantum of energy of the cells. A rise in cardiac rate from excitation is different from raising the amount of energy. The heart in hyperthyroidism gives out not only because of increased frequency, auricular fibrillation, and increased metabolism, but also because the quantum of the discharge is increased (e.g., a hot engine with the choke open). For this reason, dessicated thyroid is beneficial in heart block. In adenomatous goiter, therefore, there is an elevation of the basal metabolic rate, and energy transformation is increased. In these cases, also, there is often a secondary anemia of long duration, completely relieved on removal of the degenerating adenoma.

The course of hyperthyroidism is determined by two products: thyroxin, which increases basal metabolism; and a second product which causes the nervous phenomena—eye symptoms, and emotionalism. In exophthalmic goiter the basal rate cannot be dropped unless by overgiving iodin the production of thyroxin is temporarily stopped. Thyroidectomy plus iodin absolutely controls exophthalmic goiter. The only time the patient should be sick is when he is in the hospital. After operation he can go right back to work. The gland should be operated upon when diagnosed, or rather, the day the trouble starts. Operation failed in a large number until iodin was given. Enough tissue must be cut out; if too much, it can be remedied with dessicated thyroid. Older patients or far-advanced cases of younger persons must be treated with extra care. A greater number of the patients (60 per cent) are under forty.

Dr. John deJ. Pemberton, Mayo Clinic, Rochester, Minn. (by invitation): Present-Day Problems of Surgery of the Thyroid.—Recently there has been great progress in surgery of the thyroid gland. America is now leading in the refinement of technic, classification, physiology, and chemistry. Halstead, Mayo, and Crile stand out as standardizing the operation. Hemorrhage, sepsis, and injury to the recurrent laryngeal nerve, all have been reduced to a minimum.

Surgical treatment of goiter with hyperthyroidism has as additional features a debilitated patient and visceral degeneration. Postoperative hyperthyroid crisis formerly was frequent—tachycardia, fever, nausea and vomiting, restlessness, coma, and death in 24 hours with no anatomic findings at autopsy. Criteria to foretell this do not exist, nor can any known measures check the progress of the reaction. Efforts were made, therefore, to reduce hyperthyroidism, and the multiple-stage operation was devised. Roentgen ray, radium, boiling water or carbolic and iodin injections, high-calorie diet, rest, forced fluids, all were made adjuvants. Prolonged anesthesia was avoided, the operation was performed in bed, with preoperative morphin and scopolamin. Formerly, cases came up for operation late in the disease when the risk was very high. Operation was postponed because of the relatively high mortality and morbidity, because of frequent relapse after lobectomy, and because of the tendency to spontaneous remission and cure. For these reasons, also, several types of treatment are in vogue—rest cure, sera, drugs, irradiation, osteopathy, organotherapy, and hydrotherapy. The reduction of operative mortality to from two to four per cent has firmly established the surgical treatment, though there are objections to the multiple-stage operation.

The introduction by Plummer in 1922 of the use of iodin and Lugol's solution was a tremendous step in the progress of treatment. It might be said that the three greatest influences in the surgery of the gland have been aseptic surgery, anesthesia, and the preoperative use of iodin. Iodin produces definite changes in symptoms: the nervous tension is lessened, and the patient is able to sleep; the eyes become less staring; nausea, vomiting, and diarrhea disappear in from twelve to twenty-four hours; there is a gain in strength and weight, and within five days the basal metabolism drops thirty to forty points. Preoperative care varies with the condition of the patient. If the case is mild, ten minims of iodin t. i. d. for five to seven days previously, rest, and a high-calorie diet should be the procedure to follow. The patient should be up and around several days before the operation. If at the crisis, as much as 100 minims of iodin may be needed. Digitalis as routine is contraindicated, and should be given only when the heart is persistently decompensating.

Experience must dictate the time for operation. Preparation should be continued in a bad case until there ceases to be improvement, and the possibility of a postoperative toxic crisis or pulmonary involvement must be borne in mind. When iodin is used preoperatively, it is easier to judge the risk. When the patient is debilitated, both superior poles should first be ligated. The number of two-stage operations, however, should not exceed 2 per cent of the total number operated upon, and should be limited to those cases that are a bad risk, or those in which, because the goiter is large and firm and compresses the trachea, there is danger of tracheal collapse, or where the goiter is very vascular and there is hemorrhage or fear of injury to the recurrent laryngeal nerve, or where it seems the operation will be unduly prolonged. Six weeks should elapse between operations. The risk is greater in children than adults. Three points are important in the operative procedure: first, the establishment of the patient's confidence; second, the use of local anesthesia, if possible, but if general, an experienced anesthetist; third, the avoidance of technical complications, such as hemorrhage or injury to the recurrent laryngeal. Postoperative treatment must be symptomatic, with routine administration to the usual case of 10 minims of iodin daily for three months.

In the adenomatous goiter with hyperthyroidism, vital structures are damaged beyond repair, and the operative risk is high. Necropsy shows marked visceral damage. The public must be educated to have all nodular goiters removed when discovered, as well as all hyperfunctioning adenomatous goiters; for while it was formerly advised to let alone the adenomatous goiters that did not evidence hyperthyroidism, we now know that it gives the patient a sense of false security,

while the mortality and morbidity from such operations are very low. Retention involves the risk of tracheal compression, malignancy, or hyperthyroidism. The proportion of toxic to nontoxic goiters operated upon at the Mayo Clinic is one to two. The onset of hyperthyroidism is so insidious that it may not be noted until visceral changes have occurred and increased the operative risk. Adenomatous goiter may develop into a sarcoma, carcinoma, malignant adenoma, or malignant papilloma. From 1907 to 1925, of the whole number of goiters operated upon one in ninety-seven was malignant, of the hyperthyroid cases, one in sixty-two. Ninety-one per cent of the malignancies gave clinical or pathologic evidence of a preëxisting goiter, nor can malignancy of the thyroid be diagnosed before it is inoperable. While all adenomatous goiters should not be operated upon indiscriminately, they should be under periodic medical observation.

Slides followed showing the effect of iodin, increasing colloid, decreasing size of the cells. Figures were shown illustrating that while in 1921, 122 per cent of the cases had primary ligation (that is, some cases had multiple operations), in 1925 ligations were done in only 2 per cent. Slides demonstrated the method of operation. From January, 1926, to the present the operative mortality in exophthalmic goiter was 0.82 per cent; in adenoma with hyperthyroidism, 2.10 per cent; in adenoma without hyperthyroidism, none; in malignancy, one in 18.

Dr. Frank Harold Lahey, Chief of the Lahey Clinic, Boston, Mass. (by invitation).—Before discussing the papers Dr. Lahey demonstrated the method of palpation of the thyroid. The gland is fixed only at its isthmus; the lateral lobes may be mobilized or inverted. Because of the myasthenia of exophthalmic goiter, a good test consists of having the patient sit upon the edge of a chair, without thigh support, and hold the leg extended. The quadriceps is asthenic and few patients can hold the leg extended over thirty-five seconds.

He would pay tribute to the work of Dr. Plummer, and thinks his papers cannot be read, but must be studied.

The mortality from the multiple-stage operation is low in the hands of the experienced, and the surgeon accustomed to it should make the change to the single-stage operation gradually, since iodin may mask a possible serious outcome. Preliminary observation must determine the operation. The anesthetist should read the history and make careful observation of the patient the day before, and must note any slight change of condition on the table. Dr. Lahey has never had a death in a second hemithyroidectomy.

Early and atypical cases of hyperthyroidism are too often treated as neuroses, and an unrestorable cardiac decompensation, especially if with auricular fibrillation, may be thyrocardiac. Decompensating patients, however, stand the operation very well. Ethylene anesthesia is usually used for these persons. Since practically all malignancy arises in an adenoma, and since when diagnosis is possible metastasis has always occurred, it is wise to remove all adenomata in persons over thirty.

Dr. Harold Leighton Foss, Danville, Pa. (by invitation) recalled the work of Dr. Kendall, who in 1914 discovered thyroxin. He paid high tribute to the work of Dr. Plummer and agreed with him that morbidity is necessary only during hospitalization. It is important to get the cases early, as they are now treated medically too long.

Dr. Israel Bram arose to express his view that the solution of the problem rests with the biologic chemist. While toxic adenomata must be treated surgically, he thinks some goiters are not surgical, that surgery in exophthalmic goiter is only palliative, that the trouble will recur ten years later, and that bad-risk cases come to the medical men and if coöperative, are cured through an understanding of make-up and mind. Cure requires from six to eighteen months.

Dr. Roussel believes that there is a medical treatment combined with the x-ray, and asked if Dr. Plummer has had experience with this method. Of three thousand cases so treated in Sweden, 65 per cent were reported cured. He thinks there are no adhesions after intensive x-ray therapy.

Dr. Plummer, in closing, said that he had seen 30,000 cases of goiter and studied them intensely before he had ever spoken on treatment. He thinks that Dr. Bram has a shotgun theory and shotgun treatment and has never yet said anything valuable as to treatment. While Dr. Bram is curing five patients over a period of eighteen months in his sanitorium at $25 or $50 per week, the surgeon can cure a couple of thousand. If enough of the gland is taken out, there will be no symptoms left. If the basal metabolism is normal and some iodin is given, no symptoms will remain. This result is usually secured within three weeks after operation. This result is measurable. Nothing that Dr. Bram has said is measurable. Few patients want a goiter for eighteen months if there is a doctor around. The x-ray is good, but other things are better. Auricular fibrillation and broken compensation do not alter the mortality much. Eighty-five per cent of the mortality is due to previous prolonged medical and x-ray treatment. MARY A. HIPPLE, M.D., Reporter.

SOMERSET—NOVEMBER

The last regular meeting of the year 1926 was held in the Court House at Somerset on November 19. The president called the meeting to order at 1:30 p.m. There was no scientific program, as at this meeting the annual settlements are made, and arrangements for the coming year are outlined so far as possible.

The following officers were elected for the year 1927: president, Dr. M. U. McIntyre, of Boswell; vice-president, Dr. J. Earl Dull, of Somerset; treasurer, Dr. C. W. Frantz, of Confluence; secretary, Dr. H. C. McKinley. The new office of assistant secretary was created, and Dr. B. H. Hoke, of Meyersdale, was elected to the same.

A committee was appointed to revise the Society by-laws so as to conform to the recently revised by-laws of the State Society and the A. M. A. A committee was also appointed to revise the fee bill, both committees to report at the January meeting next year.

This was the longest business session held in a number of years. Approaching the hour for adjournment, there was a promiscuous discussion regarding the advisability and importance of treating the school children with iodin for the prevention and cure of goiter. It was impossible for the secretary to record these remarks, and it was suggested that the subject be discussed at a later date. H. C. MCKINLEY, M.D., Reporter.

WARREN—NOVEMBER

The November meeting was attended by twenty members and was addressed by Dr. Hugh Robertson, who gave a review of the pulmonary complications following operations. He classified them as inspiration, embolic direct chilling, hypostatic abscess, and collapse. Pulmonary sequellæ were formerly attributed to in-

spired particles during anesthesia until it was shown that even under local anesthesia pulmonary symptoms develop. The fact that usually the complications start several days after the operation and that experimentally it is difficult to cause an inspiration pneumonia in a healthy lung leads to the theory that the majority of cases are embolic in their nature. Abdominal operations, even skin trauma, may cause pulmonary infarcts with subsequent abscess. Expert anesthesia with all the safeguards has not greatly reduced the incidence of occurrence. The x-ray, when it has been used, also shows small infarcts in the lung rather than pneumonia. Bronchopneumonia occurs more often after septic abdominal operations. Pulmonary infarcts are not infrequent after gastric operations. Lung abscess occurs once in about 2,500 tonsillectomies. Collapse of lung is rare. It was reported only seven times before 1914. Since then, 61 cases have been recorded. Displacement of the heart to the affected side is the chief physical sign, and recovery has occurred promptly after removal of obstruction in the bronchus, a plug of mucus, for instance.

Dr. Weston, who took part in the discussion, quoted an article written for the *Journal of Infectious Diseases* by Evarts Graham, in which it was said that the immunity reactions which seem to reach zero during anesthesia will remain normal if previous to the anesthesia two ounces of olive oil are administered *per* rectum. The experimental work on which this report was based was carried on about 1908. An abstract appeared in the *Journal A. M. A.* for that year. This lack of resistance may account for sudden deaths apparently from emboli during and shortly after anesthesia. Certainly the amount the breathing area is decreased would not account for the sudden death, as patients live months and years with greatly diminished lung space.

Dr. W. M. Robertson reported a cesarean operation in a woman who had had eight previous difficult labors. The case was complicated by transverse position, hourglass contraction, and a placenta prævia. The latter condition had made diagnosis of the position difficult.

Dr. Elizabeth Beaty, who has just returned from several months' stay in Europe, reported on the fine results obtained in Switzerland with sunlight exposure for bone tuberculosis; also a visit to the Pasteur Memorial Institute, where Pasteur is buried, and where his work is continued by many research workers.

M. V. BALL, M.D., Reporter.

The Woman's Auxiliary of the Medical Society of the State of Pennsylvania

MRS. SAMUEL BOLTON, *Editor*
4701 Leiper Street, Philadelphia, Pa.

MINUTES OF THE ANNUAL MEETING
October 13, 1926

The second annual meeting of the Woman's Auxiliary of the Medical Society of the State of Pennsylvania was held at the Philadelphia County Medical Society Building on October 13, 1926, with Mrs. James I. Johnston, President, in the chair, and Mrs. Myer Solis-Cohen, Secretary. The following counties were represented: Allegheny, Beaver, Berks, Bucks, Butler, Carbon, Chester, Dauphin, Fayette, Greene, Lackawanna, Lebanon, Lehigh, Lycoming, Mifflin, Montgomery, Montour, Northumberland, Philadelphia, and Westmoreland.

Mrs. Herman B. Allyn, president of the Woman's Auxiliary of the Philadelphia County Medical Society, welcomed the visitors.

The minutes of the first annual meeting, held at Harrisburg on October 7, 1925, were read and approved.

The Corresponding Secretary, Mrs. Sidney Chalfant, of Pittsburgh, presented the following report:

We are able to report twenty-two county auxiliaries organized in our State to date, with an aggregate membership of 1,026. A list of organized counties and the number of members follows: Allegheny 256, Beaver 48, Berks 26, Bucks 27, Butler 26, Cambria 22, Carbon 9, Chester 25, Fayette 54, Greene 17, Lackawanna (organized, but membership not reported), Lancaster 11, Lebanon 17, Lehigh 61, Lycoming 70, Mifflin 20, Montgomery 41, Northumberland 16, Philadelphia 227, Potter 11, Westmoreland 33, Montour 9, total 1,026.

This is encouraging, but indicates a field for intensive work during the coming year. Every county in the State should be organized. This should be our slogan.

Letters have been sent to every county during the past year in an effort to stimulate interest and we have reason to believe our efforts have not been in vain. We have received word in several instances that, although the Auxiliary had but few members, an increase in membership was assured in the near future, all of which seems to indicate a stronger organization during the coming year.

Respectfully submitted,
EDITH L. CHALFANT,
Corresponding Secretary.

The Treasurer, Mrs. F. R. Bausch, presented the following report:

FOR THE YEAR ENDING OCTOBER 9, 1926

1.	Allegheny	9	$245.00
2.	Beaver	2	52.00
3.	Berks	1	26.00
4.	Bucks	1	31.00
5.	Butler	1	26.00
6.	Cambria	1	25.00
7.	Carbon	1	9.00
8.	Chester	1	23.00
9.	Dauphin	2	50.00
10.	Fayette	2	58.00
11.	Greene	1	18.00
12.	Lackawanna	1	25.00
13.	Lancaster	1	8.00
14.	Lebanon	1	17.00
15.	Lehigh	2	70.00
16.	Lycoming	1	48.00
17.	Mifflin	1	20.00
18.	Montgomery	1	41.00
19.	Montour	1	9.00
20.	Northumberland	1	16.00
21.	Philadelphia (Oct., 1926)	8	183.00
	" (Oct., 1927)		202.00
22.	Potter	1	11.00
23.	Westmoreland	1	30.00
		42	$1,243.00
	State Medical Society		100.00
	Philadelphia County, 1925		45.75
	Chester County, 1925		3.50
			$1,392.25

EXPENSES

Check No. 1	Feb. 13	Mrs. Parke (expense account)		$104.68
" " 2	" 13	Horner Doyle-Wright Co. ..		9.00
" " 3	" 13	Mrs. J. I. Johnston (stenographer		5.00
" " 4	" 13	Mrs. A. E. Baker, A. M. A. Dues, Phila., 1925		45.75
" " 5	Mar. 29	Mrs. A. E. Baker, A. M. A. Dues (State)		181.50
" " 6	" 29	O. K. Mohr, printing		4.00
" " 7	June 15	Mrs. J. I. Johnston (expense account)		39.82
				$389.75

Total cash receipts	$1,392.25
Total expenses	389.75
Balance on hand	$1,002.50

1	Allegheny	245 members	1	Mrs. C. A. Orr
			2	Mrs. A. B. F. Morris
			3	Mrs. H. W. Morrow
			4	Mrs. E. O. Pearson
			5	
			6	
			7	
			8	
			9	
2.	Beaver	52	1	Mrs. M. L. McCandless
			2	Miss Juliet Wilson
3.	Berks	26	1	
4.	Bucks	31	1	Dr. Julia Slack
5.	Butler	26	1	

6.	Cambria	25 members	1	
7.	Carbon	9	1	
8.	Chester	23	1	Mrs. U. G. Gifford
9.	Dauphin	50	1	
			2	
10.	Fayette	58	1	Mrs. A. E. Coughenour
			2	Mrs. H. A. Heise
11.	Greene	18	1	Mrs. R. E. Brock
12.	Lackawanna ..	25	1	Mrs. F. C. Hollister
13.	Lancaster	8	1	
14.	Lehanon	17	1	Mrs. F. B. Witmer
15.	Lehigh	70	1	Mrs. V. J. Gangewere
			2	Mrs. C. R. Fox
16.	Lycoming	48	1	
17.	Mifflin	20	1	Mrs. R. T. Barnett
18.	Montgomery ..	41	1	
19.	Montour	9	1	
20.	Northumberland	16	1	
21.	Philadelphia .	183	1	Mrs. H. B. Allyn
		202	2	Mrs. E. A. Shumway
			3	Mrs. L. F. Appleman
			4	Mrs. Samuel Bolton
			5	Mrs. Walter J. Freeman
			6	Mrs. Frank B. Kehler
			7	Mrs. W. S. Wadsworth
			8	Mrs. Wm. D. Robinson
22.	Potter	11	1	
23.	Westmoreland .	30	1	Mrs. Charles D. Ambrose

DUES TO THE WOMAN'S AUXILIARY OF THE AMERICAN MEDICAL ASSOCIATION

Allegheny	245	$61 25
Beaver	52	13 00
Berks	26	6 50
Bucks	31	7 75
Butler	26	6 50
Cambria	25	6 25
Carbon	9	2 25
Chester	23	5 75
Dauphin	50	12 50
Fayette	58	14 50
Greene	18	4 50
Huntingdon	16	4 00
Lackawanna	25	6 25
Lancaster	8	2 00
Lebanon	17	4 25
Lehigh	70	17 50
Lycoming	48	12 00
Mifflin	20	5 00
Montgomery	50	12 50
Montour	9	2 25
Northumberland	16	4 00
Philadelphia	202	50 50
Potter	11	2 75
Westmoreland	30	7 50
Total	1,085	$271 25
Paid by check to A. M. A., March 29, 1926 ...		181 50
Balance due for year ending October 12, 1926..		$89 75

The Chairman of the Auditing Committee, Mrs. Myer Solis-Cohen, presented the following report:

The Auditing Committee appointed to audit the Treasurer's accounts beg leave to report that they have examined the Treasurer's books and bank book and find them correct.

Respectfully submitted,

ROSEBUD TESCHNER SOLIS-COHEN,
(MRS. MYER SOLIS-COHEN),
Chairman of Auditing Committee.

On motion it was resolved that the report of the Auditing Committee be accepted. The President announced that this automatically accepted the Treasurer's report.

The President presented for approval a letter addressed to the State Medical Society, returning the gift of $100. There being no objections, the letter thanking the gentlemen was declared approved.

The chairman of the Committee on Legislation presented the following report:

This year being regularly nonlegislative and with no public-health laws listed in the call of our special session of the Legislature last winter, my report can of necessity give only observations of some laws enacted previous to 1926, or a word concerning prospective laws.

Concerning our State compensation laws the Supreme Court of Pennsylvania decrees that regardless of the time of death due to injury, the employer is responsible for funeral, medical, and hospital expenses. In the past, the law was interpreted as intending that only funeral expenses to the limit of $100 should be paid in case death occurred within ten days. The State Committee on Compensation Laws have reported that they find the aims of the Medical Societies of New York, New Jersey, and Pennsylvania concerning the improvement in compensation laws very similar, but the Pennsylvania law covering both the physician and the injured person still is in need of much improvement.

Quarantine in recent years, has been conducted quite differently from the method in force some years ago. Last year the State Medical Society appointed a Commission to study these laws, which has furnished us both a majority and a minority report—both very interesting. In the latter we read: "A few years ago, for financial reasons, the department was compelled to cut down the remuneration of rural health officers, with the result that enforcement of quarantine regulations in the rural districts is today extremely lax, and in many cases no quarantine is ever established at all. With the financial stringency now removed and the State treasury in good condition, we believe that our Legislature should at once give to the Department of Health such an appropriation as will enable it properly to remunerate rural health officers, and then demand efficient service."

The law enacted in the winter of 1925 imposing the annual tax of one dollar per capita on the registration of physicians each year, to provide a fund for the use of the State Board of Medical Education and Licensure has financed some quiet work that has compelled certain persons to seek new territory for their illegal practice. We are also informed that two field workers have been employed to take charge of this work.

A report making recommendations for the revision of the medical-practice laws and the difference existing between the State Boards of New Jersey and Pennsylvania is expected from the Board of Trustees.

We also expect the next Legislature to consider the compensation rates for the support of the indigent insane, that said rates may better compare with the cost of labor, food, and clothing.

The last Legislature took first steps in securing passage of a $50,000,000 bond issue. It is hoped that the 1927 Legislature will consider this favorably, as it seems vitally necessary for hospital facilities—notably, more beds for patients, and better housing, in many cases for patients as well as nurses, attendants, and physicians.

It should also tend toward better service to the helpless wards of our State if laws are enacted for the nursing staff relative to their hours on duty, making them more in conformity to laws governing other forms of labor.

Previous to the last primary election, many of our auxiliaries were supplied with the records of legislators who were asking reëlection, giving their attitude and votes at previous sessions of the Legislature. Some of them whose votes had been opposed to the general welfare in the State were made to realize the influence of physicians. The letter sent out by the Legislative Committee of the Medical Society in reference to the Governorship brought united action by our Auxiliary as well as the physicians, and we are informed that it changed at least 15,000 votes.

Counting on the probability of the election of the nominee in our dominating party, we take heart that our most cherished interest—which is the protection of public health, will have a strong advocate.

Respectfully submitted,

LOUISE K. WILSON.
(MRS. JOHN G. WILSON),
Chairman.

The chairman of the Committee on Organization presented the following report:

After the intensive campaign throughout the State during the first year, 1925, of my organization work, there seemed to be a standstill. The State was thoroughly canvassed the first year. After three appeals to each County President and having a favorable or unfavorable reply, further pressure would have lost rather than gained interest.

If immediate organization did not result after the County President endorsed the formation of an Auxiliary, there was a reason to wait and not urge such action. When I had completed my year's work there was a favorable attitude and much interest manifest in thirty-four counties. If these counties fail to hold interest, then I feel it is wiser to wait for them to come back of their own accord than to urge immediate activity.

Every county is well aware the Woman's Auxiliary exists and those unorganized will come in just as soon as they can see proven the usefulness of such an organization. The one county that called upon us, we visited, and a group of fifty women were interested and willing to organize.

Let us grow slowly so that in years to come we may have an organization founded with a firm foundation.

GRACE E. PARKE
(MRS. WILLIAM E. PARKE),
Chairman of Organization.

The chairman of the Editorial Committee, Mrs. W. Wayne Babcock, made a request for coöperation.

The chairman of the Committee on Credentials, Mrs. John Fisher, reported that there were 49 delegates, 401 registered, and that there are 1,069 paid-up members in the State of Pennsylvania.

On motion, the recommendation from the conference of presidents and secretaries for the counties that "when the medical societies have a councilor-district meeting, their auxiliaries meet at the same time or be represented by their presidents, secretaries, and delegates, in order to talk over communications from State Society officials" was adopted.

The chairman of the Committee on By-Laws presented the following report:

At the request of the National officers that the standing committees of the State conform to those of the National standing committees, the following amendment is proposed:

Amend Article IX by striking out the entire article and substituting the following: "Standing committees shall be appointed annually by the Executive Board to correspond to the National standing committees as specified in the National rules. Such additional standing committees shall be appointed by the Executive Board as the State Auxiliary or the Executive Board may deem necessary to carry on the work of the State Auxiliary."

It was moved and carried that the committee reports presented be accepted and filed.

COUNTY AUXILIARY REPORTS

ALLEGHENY. The first meeting of the Allegheny Woman's Auxiliary was held on September 29, 1925, with about 100 present. The program consisted of reports from the National meeting held at Atlantic City. Two resolutions were adopted, providing for (1) an educational campaign in the interest of public health through the medium of women's clubs by securing for them speakers from the professional body on health topics; (2) an educational campaign in public health through subscriptions to *Hygeia*. A social hour and tea followed.

November 24, 1925, there were 75 present to hear a health talk on preventive medicine and how we as an auxiliary could assist in its furtherance. Tea and a social time followed.

January 28, 1926, 65 were present. A business meeting considered amendments to the by-laws. This was followed by a talk on "Goiter Conditions in Our Public Schools," and tea.

March 22, 1926, an evening meeting was held with our husbands as guests. Seventy-five were present. Talks were given on the question of lengthened school hours in relation to the health of our children in the public schools by a member of the Pittsburgh School Board and by a physician from the Department of Public Health. A social hour and refreshments completed the evening.

May 25, 1926, the annual meeting was held, with election of officers, annual reports, etc. It was voted to lay aside a special fund of at least $100 as the nucleus of a benent trust fund. The meeting adjourned to enjoy a luncheon and social time.

In January Mrs. Anderson held a class in parliamentary law for members of the Auxiliary, which was most beneficial and enjoyable.

The first fall meeting was held in the William Penn Hotel on September 21, 1926. It was voted (1) to enlarge our trust fund, and (2) to secure books for the Children's Hospital library as part of our year's work. Mrs. Anderson kindly consented to hold another class in parliamentary law next January. We also plan to put on an extensive *Hygeia* campaign, and hope to be able to put *Hygeia* in all our public school libraries for one year. The meeting was followed by a guest luncheon and program with a health talk on "The Chief Health Menaces of Middle Life."

BEAVER. The Beaver County Auxiliary was organized November 19, 1925, with an initial attendance of 32. Well-attended luncheons have been held quarterly since that time, followed by the business meetings and an arranged program, special interest being shown in public-health work and particularly in the clinic for crippled children held monthly in the Rochester General Hospital. We now have a membership of 52, a balance of $79.75 in the treasury, and a very complete working organization.

MRS. WILLIAM C. MEANOR, *Secretary.*

BUCKS. The Bucks County Auxiliary reports 31 members for 1926. Two regular meetings are held each year at the same time and place as the medical society holds its spring and fall meetings. We have not undertaken any definite work.

JULIA H. SLACK, *Secretary.*

CHESTER. The Chester County Auxiliary was organized on March 20, 1925, with eleven members present. We have had several meetings, including two or three luncheons, and our membership has increased to 31. The president has appointed chairmen of the various committees, and we have had several hundred cards on health examinations distributed through the Health and Welfare Council.

MRS. U. G. GIFFORD, *Treasurer.*

DAUPHIN. Our county is but newly organized, a meeting being held several days previous to the convention, at which time the retiring president, Mrs. Harvey F. Smith, sent a check to the auxiliary treasurer for $50, for which a receipt was returned to us by Mrs. Bausch. Our new officers are: Mrs. G. L. Laverty, president; Mrs. H. W. George, vice-president; Mrs. E. S. Everhart, treasurer; and Mrs. E. M. Hottenstine, secretary.

REBA K. (MRS. G. L.) LAVERTY, *President.*

GREENE. Number of members, 18. Meetings are held at the homes of members on the second Tuesday of each month, except the summer months. Meetings are business and social. Committees are: legislation, press, program, and notification. At the fall meeting, eight physicians were present, each giving an encouraging talk.

MRS. R. E. BROCK, *President.*

LEBANON. The Lebanon County Auxiliary was organized July 14, 1925, with nine charter members and a full quota of officers. Regular monthly meetings have been held, with the exception of July and August. We have been assisting the District Nurse Association and the Associated Charities. We now have a membership of 19.

JANETTA C. WITMER, *Secretary.*

LEHIGH. The Lehigh County Auxiliary was organized on January 14, 1919. We are proud that we are the first medical auxiliary organized in Pennsylvania. Our object in organizing at that time was to assist the physicians to raise funds for a county medical home, but as the county society has not yet built or bought a home, we have not been called upon for financial assistance. We have a nice bank account, our total assets being $3,165.25, to which we are adding every year. We have tried to assist the medical society at all times in whatever way we could. Our auxiliary has done some charity work. Last Christmas we sent a check to two of our city hospitals. We filled a Christmas basket for a poor family, with all the provisions for their Christmas dinner. We also bought a "tuberculosis bond," and have served in numerous other ways. We have been doing *Hygeia* extension work, and have put this publication in quite a few homes, which we hope to increase this fall and winter. Our auxiliary has 72 paid-up members. We have 85 members and 1 honorary member on the list, and are making a special effort to collect all delinquent dues before the end of the year. Our doctors' wives have also profited socially. Before our auxiliary was organized, we were strangers to each other, but now we have learned to know each other and are friends. During the past year we have had a business meeting each month. Last February we had a "fasnacht" social, and each member was allowed a guest. In April we gave a public card party, charged admission, and cleared more than $160. In July we had a chicken-and-waffle dinner and a card party for members and guests. In August we had a family picnic. On November 16th we expect to have our annual luncheon, and on November 19th, a musical which will be given in the evening at the beautiful home of one of our members. Our husbands will be our guests, and each member will be allowed two other guests. We are now affiliated with the State and National Auxiliaries, and are sure that we shall profit much through these organizations.

CORA W. (MRS. V. J.) GANGEWERE, *President.*

LYCOMING. The Lycoming County Auxiliary is in the second year of its existence. From the standpoint of work we do not feel that we have accomplished much but to try to keep our members together. At the present time we have 48 members, with a few old ones yet to report. We hold quarterly meetings, always on a day that the medical society holds its meeting, in order that the women from surrounding towns may have a better opportunity to attend. The first meeting this year was the annual business meeting, with election of officers, followed by a tea at the Lycoming Hotel. The second meeting was a luncheon at the Woman's Club of Williamsport, at which time the county society loaned us their speakers, one being Dr. Beardsley, of Jefferson Medical College. The third meeting was an outing at the summer home of Dr. and Mrs. R. B. Hayes, at Anter Gap, our special guests being Dr. and Mrs. W. Wayne Babcock, of Philadelphia, who were summering in the vicinity. Mrs. Babcock talked to us informally about their organization, and it was a treat and an inspiration to those of us who were there. We have not been called upon to give assistance to the medical society, except in the entertainment of wives of visiting physicians. The most that we can say for our organization is that we are endeavoring to hold our members together so that we may be ready for any emergency call.

M. ALTA (MRS. WALTER S.) BRENHOLTZ, *Secretary.*

MIFFLIN. The Mifflin County Auxiliary is composed of 20 members, which we expect to increase during the coming year. We are very much interested in the work of the society, and of course interest is the first step towards success. We meet five times a year, with the understanding that a special meeting can be called at any time by the president. As yet we have taken up no special line of activity. Our meetings have been for the most part of a social nature. We have planned a more extensive program and greater activity in the coming year.

MONTGOMERY. The Montgomery County Auxiliary was organized February 24, 1925, with 33 members. Today, the membership is 50, which is a good percentage of the medical society membership of 140. We have not accomplished wonders, but have tried to get acquainted, and now we all know fifty doctors' wives, where before if we knew a dozen we were fortunate. Four meetings a year have been held, usually preceded by a luncheon, and always with a good speaker. This summer we entertained the members of the county medical society at a picnic which was a real get-together affair. Our last meeting was held at the nurses' home of Montgomery Hospital, coincident with the men's meeting, although the meetings were conducted separately. We had an address by a prominent surgeon on cancer control. Refreshments were served at the close of the meeting, and this the men heartily endorsed. The auxiliary has functioned a little in a legislative way by sending members to Harrisburg in 1925 to oppose the chiropractic bill in committee. We have a chairman of *Hygeia* and a working committee. We also have a publicity committee. So far, we have not accomplished much for periodic health examinations, but hope to report more favorably on this later.

MARY E. P. (MRS. GEORGE W.) MILLER.

WESTMORELAND. The Westmoreland County Auxiliary was organized May 12, 1925, in the Penn Albert Hotel at Greensburg, with an encouraging number present. Officers were elected and committees appointed. It was decided that the Auxiliary would meet the first Tuesday of each month. The June meeting was held in the American Legion Home, Greensburg. The business meeting was preceded by a luncheon. Mrs. McCracken, vice-president of the State Auxiliary, gave an interesting talk on the aim, purpose, and work of an auxiliary. In December we did some charity work. We received the names of four very poor families, and Christmas baskets containing chicken, fruit, nuts, and groceries were sent them. We are doing some *Hygeia* work, endeavoring to introduce the

magazine into different clubs and schools. At our March meeting the following officers were elected: Mrs. W. J. Walker, president; Mrs. Thomas St. Clair, vice-president; Mrs. H. H. Hamman, secretary; Mrs. D. A. Walker, treasurer. The first annual banquet of the auxiliary was held in the American Legion home on May 6th. Among the dinner speakers present was the State president, Mrs. J. I. Johnston, of Pittsburgh, who reported on the meeting of the Auxiliary in Dallas, Texas. Mrs. W. Wayne Babcock, of Philadelphia, organizer of the Auxiliary in Pennsylvania, spoke of the progress of the organization in other states, and outlined the proposed activities for this organization. Mrs. Charles H. Smith of Uniontown gave a very interesting report of the progress of the Auxiliary in Fayette County. Following the banquet, a most attractive musical program was presented. A benefit card party has been planned for the near future as a means to increase our treasury. Our meetings have been 75 per cent social. We now have a membership of 46, and have five representatives at the State meeting.

MRS. C. D. AMBROSE.

Mrs. McReynolds, the National president, made an address, and the State president announced that prizes of $25, $15, and $10 were offered by Mrs. McReynolds to the counties having the largest percentage of sales of *Hygeia.*

Mrs. J. Newton Hunsberger, delegate to the National meeting held at Dallas, Texas, April 19-22, 1926, made the following report:

It was really wonderful to go to Dallas, that stirring city of the Southwest, with its broad avenues, high buildings, many towering twenty-five stories above us, its 3,500 acres of parks and playgrounds, and its immense fair grounds, the largest in the States. They greeted us, as it were, with outstretched arms, and we felt the warmth of that welcome every minute while we were their guests.

There was an added attraction in going to Dallas for this convention, for our Woman's Auxiliary had its inception in the mind of Mrs. John O. McReynolds. She was the first president, and Mrs. Edward F. Cary was the first secretary. This year, at the annual meeting, Mrs. McReynolds was chosen president-elect of the National Auxiliary. Dallas County's auxiliary started with a membership of 31, and now has 228.

The Entertainment Committee launched its program on Sunday with a drive about the city and a musical program at the Auditorium at Fair Park. On Monday there was a drive to Fort Worth and luncheon at the Country Club. That evening, Dr. and Mrs. Edward F. Cary entertained the members of the House of Delegates, their wives, and other invited guests, about five hundred in all, at a garden party. Their beautiful home on Lakeside drive, with its most gracious hosts, supplied everything necessary for a most enjoyable evening.

Tuesday morning, the Executive Board held a meeting at the Adolphus Hotel. The Constitution and other important business were gone over very carefully preparatory to the general meeting which was to follow the next morning. At one o'clock the Dallas Women's Club entertained about 500 invited guests at a beautifully appointed luncheon at the Dallas Country Club, followed later in the afternoon by Mrs. McReynolds's wonderful garden party at her home, Maple Terrace. The officers and Mexican women, wives of the Mexican doctors who were Dr. McReynolds' guests during this convention, assisted in receiving.

Tuesday evening, five thousand gathered in the auditorium of the First Baptist Church to inaugurate the new American Medical Association president, Dr. Wendell C. Phillips, of New York. In his address he said that the science of medicine was the most tongue-tied of all the learned professions. He challenged the influential laymen of our country to a nation-wide effort for individual and community health education, and guaranteed, if they would undertake to promulgate and finance such a project, that the doctors would furnish the brains.

Wednesday morning many manifested their interest in the general meeting at the Adolphus, Mrs. Seale Harris presiding. Reports from the organized states were most interesting. Mrs. Hoxie, chairman of education and publicity, stated that twelve state presidents had responded to her circular letter. Many auxiliaries were in the course of organization. *Hygeia* is being pushed in most states. Self-education, baby-health week, cancer control, defective and deficient health laws, pure milk, and safe water were mentioned as the work of the organizations. She said each state could easily double its subscriptions to *Hygeia* this year, and further that we could hardly expect the officers of the A. M. A. to take us or our plans very seriously until we have accomplished more than we have thus far with this first definite and comparatively easy job which they have assigned to us.

Mrs. F. P. Gengenbach, president, on taking the chair, founded her remarks on the words, "Use what is in thy hand," and she said she realized she had four thousand of the first women in the United States in her hand, and she hoped to accomplish something worthy of the position they hold.

Cars were waiting when the meeting adjourned to convey us to Fair Park to the barbecue tendered by Dr. John H. Dean. Space forbids enlarging on this unusual treat. Thousands were in attendance.

The following day a Mexican luncheon was served at the same place—hot tamale, chile con carne, etc., in abundance—and a Mexican orchestra furnished the music.

Tuesday evening the Dallas County Auxiliary had planned one of the outstanding social affairs for the visiting women—a musical at the roof garden of the Baker Hotel. The program opened at 9 o'clock with the presentation of "Moontide," the Sherman prize play in the Dallas Little Theatre Tournament, followed by a number of musical selections, and closed with a dance, "Crinoline Days," by local talent. Refreshments were served, and a most enjoyable social hour followed. The punch was served from a large block of ice into which rosebuds were frozen. Huge baskets and bouquets of spring flowers, especially the Texas Blue Bonnets, filled the room.

The president's reception at the Adolphus and Baker Hotels was the closing event.

In conclusion, I would say there is much to be gained from these "get-together meetings."

SUSAN B. F. (MRS. J. NEWTON) HUNSBERGER, *Delegate.*

The Nominating Committee presented the following report: President, Mrs. J. Newton Hunsberger, 514 W. Main Street, Norristown; vice-presidents—first, Mrs. C. H. Smith, Uniontown; second, Mrs. E. A. Shumway, Philadelphia; third, Mrs. M. L. McCandless, Rochester; treasurer, Mrs. F. R. Bausch, 2911 Chew St., Allentown; recording secretary, Mrs. Myer Solis-Cohen, 4632 Walnut St., Philadelphia; corresponding secretary, Mrs. H. C. Podall, 622 Swede St., Norristown; directors—3 years, Mrs. W. J. Walker, Greensburg; 3 years, Mrs. Wm. E. Parke, Philadelphia; 2 years, Mrs. Kenneth Wood, Muncy; 1 year, Mrs. Charles S. Rebuck, Harrisburg; 1 year, Mrs. James I. Johnston, Pittsburgh; nominating committee —Mrs. H. C. Frontz, Mrs. E. S. Buyers, Mrs. Wm. E. Parke, Mrs. E. B. Marshall, Mrs. Frederick J. Bishop; parliamentarian, Mrs. Wm. Anderson, Pittsburgh; committee chairmen—organization, Mrs. W. Wayne Babcock, Rydal; education and publicity, Mrs. Samuel Bolton, 4701 Leiper St., Philadelphia; public relations (legislative), Mrs. John G. Wilson, State Hospital, Norristown; Hygeia, Mrs. Howard Mellor, R. D. 6, West Chester; program, Mrs. H. W. Morrow, 7400 Irvine St., Pittsburgh.

On motion, the secretary cast the ballot. The president declared the nominees elected.

The meeting adjourned.

Respectfully submitted,

ROSEBUD TESCHNER (MRS. MYER) SOLIS-COHEN,
Recording Secretary.

WESTMORELAND COUNTY AUXILIARY

The regular meeting was held on the evening of October 5th at the home of Dr. and Mrs. W. M. Bortz, of Greensburg. Mrs. C. D. Ambrose and Mrs. J. W. Barkley, both of Ligonier, were joint hostesses with Mrs. Bortz.

The meeting was very well attended. An interesting report of the State convention, held recently in Philadelphia, was given by Mrs. Ambrose. The club members were pleased to learn that their president, Mrs. W. J. Walker, had been appointed one of the State officers.

A motion was passed to give ten dollars from the treasury to the "Forget-me-not" drive being conducted for disabled soldiers at Parkview Hospital, Aspinwall, Pa. The purpose of the fund is to provide a floral tribute for each soldier who dies there.

Following the business session, bridge was played, and attractive refreshments were served by the hostesses.

MRS. PAUL G. MCKELVEY.

Most of us do not know when to stop exercising for the heart's sake. A very excellent guide is furnished by the heart itself in what for convenience can be called "the heart exercise creed." It should be committed to memory by persons who want to keep a well heart strong. This is the heart exercise creed: Effort should cease when it brings on shortness of breath, heart hurry, chest oppression, chest pain, or undue physical fatigue.—S. CALVIN SMITH.

THE

MEDICAL SOCIETY OF DELAWARE

EDITORIAL

HIGHBROW MEDICAL EDUCATION

Notwithstanding the claims from headquarters that there is no shortage of physicians in the country districts and the assurance that all is well with our medical schools, we are beset with serious misgivings as to the present trend and the future of medical practice. There is no use in glossing over the fact that the study of medicine has become the privilege of the rich—the poor, the ambitious, and frequently the more capable boy being left out in the cold.

It takes at least seven years to obtain a medical diploma, and one or two more to secure the right to practice. The minimum cost of this medical education, not counting the loss of earnings during that period, is around fifteen thousand dollars. How many can afford it? It is well enough to say that the poor boy can earn some money during his spare time. In the first place, the medical curriculum of the modern school is so crowded with useful and useless, mostly useless, courses that there is little if any spare time left. Besides, it is rather difficult to obtain a part-time job, and if one is secured, the compensation is so small that it covers but a very slight part of the total expenses. In the majority of cases, the boy who works during his semester draws on his reserve of nerve energy, and if he does not break down during his college days, he is left so depleted mentally and physically that he is scarcely in a condition to carry on after graduation. The other aids to the impoverished student, namely, scholarships and loans, need scarcely be mentioned, since they are available to a comparatively small number, are as a rule insufficient, and the loans have the additional drawbacks of saddling upon the young doctor a debt which he is not in a position to pay during the first few years of practice.

The argument is often advanced that despite the almost prohibitive cost of medical education, the annual enrollment is always complete with a long waiting list of anxious students clamoring for admission. This is so; but it merely shows in another way that the country is prosperous and money is plentiful. The overcrowding of our medical schools is on a par with the overcrowding of our streets with automobiles, the mammoth ocean liners with Amerian tourists, or the Philadelphia stadium with people who were willing to pay exorbitant sums to see a prize fight. But how about brain workers, the salaried man, doctors, lawyers, preachers, engineers? How many of them can afford to send their boys to a first-rate medical school?

There is another and much more serious phase to this situation. If conditions continue as at present, the medical ranks will be filled with the children of the well-to-do or the commercially successful. Their background, their social environment, and their innate propensities are not likely to be conducive to idealism. Crass commercialism, an ambition for a brilliant "career," a desire for ease and comfort achieved without much effort, are likely to be the actuating motives. A new and much higher standard of living among doctors will gradually evolve. Large and expensive establishments, costly automobiles, chauffeurs, servants, and the usual claptrap of the opulent will become the accepted goal for the young doctor, a goal to be reached as quickly as possible. If free service at the clinics or in the hospital wards, gratuitous attendance on the poor, or unremunerative labor in the laboratory interfere with the attainment of the goal, they will be avoided as useless impediments. The question asked of a doctor will be not how many interesting cases he has studied carefully, or what valuable contribution (the kind that cannot be advertised in the newspapers) to medicine he has made, but whether he prefers a Cadillac to a Pierce Arrow.

We can visualize a time when this matter of the choice of cars will occupy a prominent place in the discussions of our medical meetings, if for no other reason, because there will be no other medical topic on which the commercially successful doctor will be able to talk intelligently. Yes, there will be another: Whether Dr. X is not a cheap skate to charge only one hundred dollars for a tonsillectomy, when two hundred should be the regular fee: or whether it is not more "scientific" to make an exhaustive laboratory study, including gall-bladder drainage, in

every minor complaint, the kind that the old-fashioned doctor relieved by a C. C. pill. Of course, it will not be mentioned that the fee for such exhaustive study should be not less than one hundred dollars and as much more as the patient can be hoodwinked into paying.

Is this picture exaggerated? In answer, we point to what is already taking place in our profession, and with that we rest our case.

TRANSACTIONS OF THE HOUSE OF DELEGATES

137th Annual Session

TUESDAY, OCTOBER 12, 1926

The meeting of the House of Delegates was called to order by the President, Dr. J. B. Derrickson, of Frederica, Delaware, at the New Century Club, Dover, Delaware, at 3:15 p. m.

The roll was called by the Secretary, Dr. W. O. LaMotte, of Wilmington, and the following members responded: W. T. Jones, Henry W. Briggs, Joseph Bringhurst, J. S. McDaniel, W. V. Marshall, W. E. Bird, H. L. Springer, J. R. Elliott, R. B. Hopkins, J. B. Derrickson, W. O. LaMotte, Olin S. Allen, L. D. Phillips, J. Palmer, O. W. Show, Albert Robin, and G. F. Jones.

The motion that the reading of the minutes of the last session be dispensed with was seconded and carried.

The following Committee on Nominations was appointed by the Chair: H. W. Briggs, of New Castle County; Joseph Bringhurst, of Kent County; W. T. Jones, of Sussex County.

The report of the President was read as follows:

Members of the House of Delegates: It is fitting that the retiring president should render an account of his stewardship. The general activities of the Society have been well carried on during the past year. Coöperation among officials, committees, and the membership in general has been marked by unanimity of purpose, with the one object of furthering the best interests of the organization.

The total active membership one year ago was 150, and today it is 156—a gain of six members. We have lost some by death.

The work of all committees has been uniformly good. The scientific papers presented before the societies have been of a high standard. But I am sorry to say that the attendance at the society meetings could be better.

As president of this Society, I wish to congratulate the officers, councilors, delegates, and committees for their work and success of the past year. The Society is fortunate in having for its secretary Dr. LaMotte, who is devoted to our interests, and has not spared himself to give his best service to the work of his office. Under his stewardship we have no fears as to the future of the Society. Its history and traditions have always been of the finest, and the challenge to this day and generation is to go forward.

The report of the Secretary was as follows:

To the members of the House of Delegates: At the present date, the membership of the State Society is in Kent County 26, in New Castle County 106, and in Sussex County 25, making a total membership of 157.

Our annual dues are $4 per member, $2 of which goes for a journal, and $1 for the defense fund, leaving $1, or a total of $157, on which to run the Society. We have always paid for the annual luncheon, leaving a very small sum for other purposes. It is necessary to have a good stenographer to report the mectings. There is now in the treasury $390.08, and in the defense fund $1,386.79. We must devise some means for adding to the general funds, or we cannot run our Society with any credit to ourselves.

I suggest one of three things for your consideration; namely, eliminate the JOURNAL, which I do not favor, reduce the defense fund to fifty cents per member, or increase the dues to $5.

W. O. LAMOTTE, *Secretary.*

QUESTION: Are we needing the defense fund?

DR. LAMOTTE: The fund has never been used, and the money has accumulated some interest.

QUESTION: Could the contributions to that fund be lessened to leave more for the general fund?

DR. LAMOTTE: I think that would have to go over until next year for action, as it would require an amendment to the By-Laws.

QUESTION: If we reduce the defense fund to fifty cents and transfer the other fifty cents to the general fund, would that make sufficient margin to operate the Society? That would be only $75.

DR. LAMOTTE: It would be that much more than we have. One dollar a member goes to run the Society, pay for the programs, stamps, luncheon, etc.

A motion was made to increase the annual dues $1 to cover this but it was decided to bring the subject up later under new business.

The report of the Treasurer was read as follows:

RECEIPTS

Balance on hand October 6, 1925	$324.90	
Dues New Castle County Society	428.00	
Dues Kent County Society	102.00	
Dues Sussex County Society	116.00	
Rental of exhibition spaces	35.00	
Dividends upon bank stock	52.50	
Interest	7.18	
Deposit October 27, 1925 (no record of source)	8.78	
Total		$1,074.36

EXPENDITURES

Check No. 204	Star Publishing Company	$26.50	
" " 205	Amy B. Macklen	5.00	
" " 206	H. A. Roop	5.50	
" " 207	W. O. LaMotte	19.93	
" " 208	American Medical Association	13.60	
" " 209	Hotel DuPont	102.00	
" " 210	Helen D. Kirk	25.00	
" " 211	Medical Society State of Penna.	296.00	
" " 212	St. Louis Button Company	8.25	
" " 213	Wilmington Savings Fund Society	148.00	
" " 214	W. Edwin Bird	6.25	
" " 215	K. A. Horner	1.50	
" " 216	Delmarvia Printing Company	26.75	
	Total		$684.28
	Balance on hand October 11, 1926		$390.08

Defense fund in Wilmington Savings Fund Society September 24, 1926, $1,386.79 of which $43.42 was interest drawn during the year.

SAMUEL C. RUMFORD, *Treasurer.*

Treasurer's report examined and found correct.

H. W. BRIGGS,
W. T. JONES,
Councilors and Auditing Committee.

After audit, this report was declared correct and, upon motion, accepted.

The following report of the Publication Committee was accepted as read:

Your Publication Committee has little to report except routine. Since the last meeting, twelve numbers of the ATLANTIC MEDICAL JOURNAL have appeared and have been distributed to the members. These have contained the transactions of our Society, the papers read there, some papers read before other societies within the State, together with some papers read by nonmembers without the State. We have also published numerous miscellaneous articles, editorials, and book reviews.

We wish to call your serious attention to the fact that the number of papers read before the State Society is too few to provide copy for twelve numbers, even when spread out rather thinly. We have been compelled this past year to utilize three papers written by our Pennsylvania confreres, and not read before any Delaware meeting. We have also been compelled to fall back upon two papers read before the New Castle County Society, and worst of all, we have been without copy of any kind for our section of the September and October numbers of this year. In fact, the State meeting last year provided copy, including the transactions and presidential addresses, for only six numbers of the ATLANTIC, truly a miserable showing. Certain it is, the third oldest medical society in the United States should be ashamed of such a paltry contribution to current literature.

The only remedy for the above condition consists in having more papers read at our State meeting, and in the submission for publication of all the more serious papers from all the county societies Thus, and thus only, can we escape total submersion or a state of *"spurles versunkt."*

Respectfully submitted,

W. EOWIN BIRO, *Chairman.*

DR. ROBIN: Something should be done about this report. It used to be that when our own publication reached only our own members, it did not matter so much, but now whatever is done or said in the Society

reaches practically the entire world. The ATLANTIC MEDICAL JOURNAL is received everywhere, is to be found in every medical library, and it behooves us out of sheer self-respect to adopt some measures to have a department worthy of the name.

DR. BIRD: I think the seat of the trouble is in the county societies. Our State Society program lasts only two days, and frequently requires only two sessions, so far as the reading of papers is concerned. For instance, out of the ten papers on the program, there will probably be two or three absentees, so that there will be only six or eight papers. It may be that several of these papers could be grouped and published together. Last year we had copy from the State Society meeting for six numbers. One included merely the transactions of the House of Delegates, another the President's address, and a third the address of a visiting trustee of the American Medical Association. This means that, of the five or six printable papers on the program, we had enough copy for only three numbers of the JOURNAL out of twelve.

We are now affiliated with the Pennsylvania State Society, and we both gave up our individual interests for the betterment of the combined JOURNAL. It is hoped later on to include Maryland and possibly the District of Columbia. It is going to be a good medical magazine. Each of the states that come in will be allowed certain space for sectional news covering their respective transactions. If Delaware cannot do better than she has been doing, we had better cancel the two dollars for subscriptions or buy the JOURNAL out of our own State fund and give up all idea of publishing a Delaware section, and publish merely our transactions and an occasional paper that seems to be of a more general appeal.

We should not have to face such a situation. This is the third oldest medical society in the United States, and we should be as proud as peacocks of that fact. While the State is small, we do not always have to act small. Let us get together and have something for the Delaware section. The answer, it seems to me, is to have all the papers from the three county societies sent to the editor for publication. They can then be culled over, and perhaps several short papers printed together. If we could get twelve or fifteen papers each year, it would greatly enhance the value of our magazine to us, and be beneficial to the Society. I do think that a society as old as this should have a better record when it comes to medical writing.

DR. ROBIN: I should like to ask whether the county society meetings are sufficiently interesting to be reported in the JOURNAL.

DR. ELLIOTT: I think the meetings in Sussex have been of sufficient interest to be published in the JOURNAL, and we have had some very interesting papers by men from the outside. We have had some very good meetings in Sussex during the past year or two because we have held our meetings in the various towns instead of always at one place. Perhaps New Castle County should furnish a little more than the other counties, but if we could make Sussex and Kent responsible for six months and New Castle responsible for the other six months, we could make a good showing in the JOURNAL.

DR. ROBIN: I move that the House of Delegates recommend to the Society at large that the Secretary request the respective county society secretaries to submit to the Publication Committee the transactions of their monthly meetings, without any discrimination, leaving to the discretion of Dr. Bird what shall go in for publication.

SECRETARY: How are they to be transmitted?

DR. ROBIN: Mailed to them. The secretary of each society is supposed to get all the transactions of the meeting and mail them to the Secretary of the State Society or to the Editor.

SECRETARY: I am afraid it will end there, with one or two exceptions. I have tried to have communication with some of the counties, and even sent a stamped envelope, but did not receive a reply.

DR. ELLIOTT: I think there are enough people in the House of Delegates who are really interested in this Society to force the county secretaries to do their duty. I believe that so far as Sussex is concerned we can give a report of our meetings to the Publication Committee.

Dr. Robin's motion was seconded and carried.

The reports of the Committees on Hospitals, on Health Problems in Education, and on Public Policy and Legislation were called for, but none were presented. Dr. Elliott stated that he, as one of the members of the latter committee was not aware of any meeting ever having been called; that he had written and asked the chairman if there was anything to be done, but had received no reply.

DR. ELLIOTT: We should feel very bad about this. A year or two ago I suggested that each committee be compelled to submit a written report, whether its members were present at the meeting or not. Half of the committees have made no report today. I am wondering where the fault lies. We who are on the committees have a little hesitancy in trying to force a meeting. Are the chairmen the ones upon whom the blame should be put? If so, some pressure should be brought to bear upon them to bring in reports. There should be some report made, or else there is no necessity for the committee.

Dr. Robin moved that the House of Delegates refuse to accept any committee report that is not submitted in writing. Carried.

The question was asked whether the chairmen of committees are notified of their appointment. The Secretary replied that they are always notified, and urged to make a written report at the next meeting. That had always been done since he had been secretary. He suggested that the Nominating Committee seriously consider the names submitted for committee appointments, as he had in mind one man at present nominated to represent the State Society who had not attended even his own county medical society.

DR. BRIGGS: I heard only the last few sentences of Dr. LaMotte's remarks. The Nominating Committee consists of one man from each county, and we do not know the men who have just been referred to by the Secretary. If there is any criticism of that kind, I do not know how to correct it. We have attempted to pick out men who are active in our own communities, and while that means repetition of some names, because only certain men take an interest in the Society and we always see the same faces here, we shall be glad to know of others who can serve on the committees.

The Secretary explained the previous discussion, repeating his statement that the Nominating Committee sometimes nominates men to represent us in a neighboring state who have not even attended their own county medical meetings.

DR. BRIGGS: I do not believe that is due to the fact that we nominate the wrong men, for we have tried all of them. If there are any suggestions, we shall be glad to know of new names. These nominations are purely tentative.

Dr. Briggs presented the following report of the Nominating Committee:

First Vice-President, G. F. Jones, Sussex; Second Vice-President, James Martin, Kent; Secretary, W. O. LaMotte, New Castle; Treasurer, S. C. Rumford; Councilor, W. T. Jones; Delegate to A. M. A., W. O. LaMotte; Alternate to A. M. A., O. S. Allen; Delegate to Maryland Society, G. V. Wood; Delegate to Pennsylvania Society, Earl Bell; Delegate to New Jersey Society, W. C. Deakyne; Delegate to New York Society, E. H. Lenderman; Delegates to State Pharmaceutical Society, H. M. Manning, I. L. Chipman, C. J. Pricke't; Committee on Scientific Work, M. A. Tarumianz, C. DeJ. Harbordt, J. B. Waples; Committee on Public Policy and Legislation, A. T. Davis, J. W. Bastian, O. V. James; Committee on Medical Education, H. W. Briggs, Joseph McDaniel, James Beebe; Committee on Necrology, L. S. Conwell, H. Lynch, John Palmer; Committee on Publication, W. E. Bird, A. Robin, W. O. LaMotte; Hospital Committee, J. S. McDaniel, J. R. Elliott, Joseph P. Wales; names to be submitted to the Governor for his selection of two as members of the Medical Examining Board, G. F. Jones, Wm. Wertenbaker, H. L. Springer, Joseph Bringhurst, J. R. Elliott, J. H. Mullen, J. A. Ellegood, Eli Nichols, D. T. Davidson, J. W. James; Committee on Heath Problems in Education, H. W. Briggs, A. T. Davis, J. Roscoe Elliott, J. A. Ellegood, Fred F. Armstrong.

A motion was made and carried that the report be accepted.

The report of the Committee on Scientific Work was called for, and Dr. Marshall said he was sorry to report nothing.

The following report of the Committee on Medical Education and Licensure was read by Dr. Henry W. Briggs:

The Annual Congress on Medical Education and Medical Licensure was held in Chicago on February 15, 16, and 17, 1926.

Dr. A. D. Bevan, Chairman of the Council on Medical Education, welcomed the delegates, and emphasized the fact that medical schools must be developed along broader lines. The necessary expense of proper medical education makes it prohibitory for the medical student to begin to meet the same, and it is evident that much must be supplied by the state and private endowment in the way of equipment and hospital facilities. The average age at which a physician enters his life work is 28. This should and could be reduced to 25 years without reducing the requirements.

Dr. Charles R. Mann, Director of the American Council on Education, read a paper on "Coöperation in Educational Problems." He stated that the time had come when the medical student should come from a selected class. Only such students as show an aptitude for certain professions or other lines of business should be encouraged to enter them. This is especially true of the medical profession.

Dr. Henry M. Tory, President of the University of Alberta spoke on "The University's Function in Medicine." Laws of nature depend on laws of science. Research work should be stimulated. A "bedside manner" can not be substituted for a blood count or chemical analysis.

Dr. Albert D. Dinwiddie, President of Tulane University, presented a paper on "The Program of Medical Education and its Reactions." He discussed it under three general heads: (1) the problem of the colleges of liberal arts and sciences, (2) the medical colleges giving but two years of medical instruction, (3) the colleges giving the full four-years' course. The latter must necessarily be in large cities where there can be furnished an abundance of clinical material and hospital facilities. He stated that he thought all medical colleges should give the entire course, as students from the two-year colleges often had difficulty in being admitted to the upper classes of the four-year colleges.

Dr. William Pepper, of the University of Pennsylvania, stated that about forty students each year were admitted to the third-year class from the two-year medical schools. The University is unable to admit all of the students who take their premedical training at the University of Pennsylvania.

Dr. Walter A. Jessup, President of the State University of Iowa, said that a readjustment in medical education is demanded. He recommended the abolishing of simple time requirements and the overlapping of instruction in the various departments.

Dr. Samuel P. Capen, Chancellor of the University of Buffalo, told of rather extensive experiments being conducted in his medical school, simulating the university plan, and tending to make the course more flexible.

Dr. Augustus Downing, of the New York State Board of Regents, stated that it is impossible to fix a standard on the basis of hours. It is necessary, however, to fix a minimum, which New York had fixed as 3,600 hours for the four-year course.

Dr. Walter L. Bierring, Secretary of the Federation of State Medical Boards of the United States, insisted that there was a lack of practical training in the medical schools. He thought much could be accomplished by coöperation between the medical colleges and the state boards.

The important problem of the saving of time in the education of medical students was ably discussed by Dr. Charles H. Judd, Head of the Department of Education at the University of Chicago. He thinks, by the use of proper teaching and suitable books, that what is done in the first eight grades could be accomplished in six years, thus leaving two additional years for advanced studies.

Dr. John H. Dodson, Director of Health and Public Instruction of the American Medical Association, spoke on "The Importance of Research in Educational Institutions." Every medical student should be given a research problem, selected so as to develop in him these important faculties. Many valuable contributions to medicine have been made by physicians in active practice and by exactly the same methods as are used by the research worker in the laboratory.

Dr. Henry Christian of Harvard Medical School presented a paper on "The Selection of a Hospital for Intern Training." His opinion is that a service largely of medical and surgical work is much to be preferred to one of a rotary service, especially where the service is limited to one year. He states that the best index is the number of autopsies held, these findings being of more practical value than any other distinct service. Any hospital which does not take twenty-five per cent of the deaths to the morgue for autopsy is not suitable for internship. A list of these hospitals was given, the greatest being Johns Hopkins, 93 per cent; Mayo Clinic, 86 per cent; Presbyterian Hospital, Chicago, 62 per cent; Mt. Sinai, New York, 61 per cent; and Jefferson, Philadelphia, 38 per cent.

Dr. Rodman, Secretary of the National Board of Medical Examiners, made an excellent illustrated report of the accomplishments of the National Board in its ten years of existence.

Dr. Guy Connor, Secretary of the State Board of Michigan, discussed the admission of foreign medical graduates to licensure examinations. He thinks that an extra year of study in a class-A medical school and American citizenship should be required.

Dr. K. P. B. Bonner, Secretary of the State Board of North Carolina, spoke on the subject of the revocation of medical licenses. The state laws should give authority for revocation where such action is necessary, Many states do, while others do not.

Dr. Don R. Griswold, Commissioner of Health for the State of Iowa, strongly urged the annual registration of physicians. This is a subject already acted upon by several states and being considered by others. Our own State of Delaware was probably the pioneer in this action, as the physicians of this State must register with the clerk of the peace in order to secure the annual commercial license.

Dr. Ray Lyman Wilbur, President of Stanford University, delivered a forceful adddress on "Health—A Business Asset" before the Chicago Association of Commerce. The most useful knowledge is health knowledge. We must observe the laws of nature. Although many animals and plants have been domesticated, yet no legislation can prevent the working of a natural law. If any city would put in practice and observe the known laws of health, that city would soon surpass all other cities. Sickness necessitates the lowering of efficiency, and the reason people of the temperate zone are the most progressive is because they are the healthiest.

The Congress on Medical Education this year was especially notable for the discussion on shortening the medical course, protection of the public from inferior practitioners, and the uniform opinion of the value of the hospital intern year. No suggestions were made in regard to increasing further the entrance requirements into medical colleges. The development of a sufficient number of well-trained physicians to meet the public need was realized.

A motion to accept this report was carried.

NEW BUSINESS

A resolution, offered by Dr. Allen and seconded by Dr. Bird, to increase the annual dues of the Medical Society of Delaware from $4 to $5, in order to defray expenses, was carried.

Dr. Robin presented the following resolutions adopted by the staff of the Physicians and Surgeons Hospital, Wilmington:

1. WHEREAS, in the opinion of the majority of physicians using this hospital, alcoholic medicaments have a definite place in the treatment of certain diseases, notably pneumonia and septic infections, and

2. WHEREAS, It is the professional judgment of the majority of physicians using this hospital that human life may be sacrificed for want of alcoholic stimulation when indicated, and

3. WHEREAS, This hospital is prohibited by law from furnishing alcoholics when desired by the attending physician, and

4. WHEREAS, The Volstead Act recognizes alcoholics as legitimate medicaments, and the U. S. Government furnishes these drugs to all of its hospitals, and

5. WHEREAS, We fail to see any justice in depriving the citizens of Delaware and patients of this hospital from whatever benefits may be derived from the administration of alcohol, when indicated: therefore be it

Resolved, That the staff of the Physicians and Surgeons Hospital endorses any movement looking toward the repeal of the Klair law, in so far as it affects the practice of medicine.

DR. ROBIN: The fact is pointed out that physicians in other states can use whiskey or alcoholic medicaments when they deem it advisable, and the United States Government likewise permits the use of whiskey

by its physicians, and it seems that there is unfair discrimination against the profession in this State. A majority of the physicians still believe that alcohol is a very valuable remedy, and the State Society is called upon to take some action toward the repeal of this law. The condition created in this State is not that doctors are not using whiskey, but that they are becoming sort of bootleggers. Practically every doctor in this State has employed whiskey when it was indicated, and he either acted as a bootlegger or had some member of the family do so. If we have to give this drug to our patients surreptitiously we will certainly lose our self-respect, and I think the matter is important enough to discuss at this meeting and to take some action on to present to the Society tomorrow.

DR. BIRD: This is a matter that affects every doctor in the State, whether in favor of prohibition or not. The Volstead-Klair-Loose combination amounts to a dictation in the practice of medicine in the State of Delaware. These various acts presume to tell us what we shall not use, and by inference it would be only a step further to tell us what we shall use. The New Castle County Medical Society approved these resolutions by a vote of 26 or 27 to 1. This is the session just prior to the meeting of the Legislature, and I think it would be wise to have this House of Delegates approve these resolutions. I move that this House of Delegates go on record as approving these resolutions, and that the matter be placed in the hands of the new Committee on Public Policy and Legislation, with instructions to act as efficiently and as quickly as possible in carrying them out. Seconded and carried.

DR. LAMOTTE: I move that this Society recommend to the Legislative Committee that they do what they can to make it necessary for every institution for the feeble-minded in the State to have a resident physician. I offer this motion because I have heard that at Stockley they house the syphilitics and all other patients together, and that while they may have a good superintendent, they have no physician to study the cases individually and thoroughly.

DR. G. F. JONES: I am a physician at Stockley; that is, I make visits there when called. I have made a number of Wassermann tests, all of which were negative in suspected cases. If we have had much syphilis down there, we do not know it.

DR. A. T. DAVIS: I think the trouble lies with the board of managers, and that the resolution might better be directed to having some physicians upon that board. It does not include a medical member, and I believe the problem of the feeble-minded requires that the board should include one or two physicians, and preferably one skilled in mental diseases.

DR. LAMOTTE: I have been approached on the question by several people. If you desire to change the motion, I have no objection to withdrawing it.

DR. BRINGHURST: Have you any definite knowledge about the institution or the conditions there?

DR. DAVIS: They have three separate buildings: one newly erected for negro girls, one for white girls, and one for white boys. Their present capacity is about 160. Dr. Jones probably knows more about that than I do, but they have no medical man on the board, and they undoubtedly should have. The resident superintendent should be a physician. With the present state of their finances it may be that they cannot pay for a medical superintendent for the number of patients they now have there. I move to amend the Secretary's motion to the effect that this Society recommend to the Legislative Committee the appointment of at least three medical men, one from each county, to be appointed by the Governor, to serve on the board of these institutions for the feeble-minded. Seconded and carried.

DR. ROBIN: Evidently the American Medical Association expects us to do something in regard to their letter concerning the national lye bill and the District of Columbia chiropractic bill, both now before Congress. I move that the Secretary be instructed to prepare a set of resolutions embodying our approval of the former and disapproval of the latter, and present them to our respective senators and congressmen. Seconded and carried.

SECRETARY: Some state societies have passed resolutions advocating that all health officers should be physicians.

DR. A. T. DAVIS: At the meeting of the American Public Health Association last year there was introduced a resolution which stated that a man shall have had special training in health work before he can be appointed a health officer. There are at present several cults which give to those who have not studied medicine a course of training leading to a certificate as Doctor of Public Health. The American Medical Association went on record last year as saying that health officers should be physicians and not simply laymen with a certain knowledge of public health added to their previous training. I myself believe that health officers should be physicians possessing the basic knowledge which is very essential to a proper performance of public-health work.

DR. BIRD: I move that all the expenses of this meeting be authorized, and that the scientific program be approved. Seconded and so ordered.

The Secretary read a letter of invitation from Dr. M. A. Tarumianz, of the Delaware State Hospital at Farnhurst, to hold the next meeting of the Society at Farnhurst. Acceptance of this invitation was moved by Dr. Briggs, seconded, and carried.

It was moved by Dr. Briggs that the Secretary be instructed to write to Ex-Secretary of State A. R. Benson, of Dover, Delaware, thanking him for the beautiful floral decorations presented by him for this meeting. Carried.

The following report of the Committee on Necrology was presented by Dr. Tomlinson:

Since our last annual meeting it has been our sad misfortune to lose by death our highly esteemed fellow member, Dr. James A. Draper, Jr., of Wilmington.

Dr. Draper. was the son of Dr. James A. Draper. Sr., a man who for many years was a leading physician and surgeon in Wilmington. His mother was a daughter of Governor Polk of Missouri, who was a former Delawarean.

The subject of this sketch was born in Wilmington; was educated at the Friends' School in our city, and at Yale University. He was graduated from the Medical Department of the University of Pennsylvania in 1898, and served his internship at the Presbyterian Hospital in Philadelphia. He was licensed to practice in Delaware in 1900, when he located in his native city, where he soon gained prominence as a well-trained physician and surgeon. His father, who was for many years an outstanding figure in his profession in our State, was chief of one of the surgical staffs of the Delaware Hospital from its inception, on which he took his son as his first assistant. This position the latter filled with efficiency, and was soon chosen as chief of another one of the surgical staffs of said hospital, which position he occupied until his death.

In 1906 Dr. Draper married Miss Elsie Ford of St. Louis. Of this marriage two sons were born, both of whom are living and are at college.

James A. Draper, Jr., was an indefatigable worker whose love for his profession was marked, and whose devotion to it was probably partly the cause of his premature death. Much might be truthfully said in eulogy of Dr. Draper, but it would be contrary to his desire, could he be consulted. Suffice it to say that he was a public benefactor, intelligent, refined, skillful, and of great value as a citizen and surgeon, whose place in the hearts of those who knew him cannot be easily filled.

"Death loves a shining mark, a signal blow," but in the case of our illustrious friend it was, in the words of Milton,

"That golden key
That opes the palace to eternity."

P. W. TOMLINSON, *Chairman,*
Committee on Necrology.

The meeting adjourned at 5:30 p. m.

J. B. DERRICKSON, *President,*
W. O. LAMOTTE, *Secretary.*

Medical News

Deaths

MRS. FANNY M. IRWIN, wife of Dr. James A. Irwin, of Philadelphia; November 18.

GEORGE W. HARRINGTON, M.D., of Hazleton; Jefferson Medical College, 1894; aged 58; recently.

MUGERDITCH D. HACHADOORIAN, M. D., of Philadelphia; Jefferson Medical College, 1891; aged 61; November 8.

JAMES B. BLACK, M.D., of McKeesport; Jefferson Medical College, 1883; aged 74; in October, of angina pectoris.

JOHN W. ELY, M.D., of Washington; Pulte Medical College, Cincinnati, Ohio, 1882; aged 71; September 19, of carcinoma.

ROBERT W. ALLISON, M.D., of Wilkinsburg; Jefferson Medical College, 1886; aged 68; October 27, of angina pectoris.

JAMES R. MILLER, M.D., of Philadelphia; University of Pennsylvania School of Medicine, 1878; aged 76; October 27, of heart disease.

ISAAC W. MENDELSOHN, M.D., of Wilkes-Barre; College of Physicians and Surgeons, Baltimore, 1905; aged 53; September 14, at Atlantic City.

R. H. BECK, M.D., of Newberg, Northampton County; University of Pennsylvania School of Medicine, 1874; aged 77; November 30, of a stroke.

ALVA L. CHAPMAN, M.D., of Tarentum; College of Physicians and Surgeons, Baltimore, 1879; also a druggist; aged 68; October 1, of heart disease.

HERBERT L. JONES, M.D., of Pittsburgh; University of Pittsburgh School of Medicine, 1907; aged 44; October 24, of pulmonary hemorrhage.

GEORGE S. SCHOYER, M.D., of Pittsburgh; Georgetown University School of Medicine, Washington, D. C., 1910; aged 47; October 2, at St. Francis Hospital.

HENRY ERNEST SCHMID, M.D., of White Plains, N. Y.; University of Pennsylvania School of Medicine, 1859; aged 93; October 10, from infirmities of age.

SAMUEL H. HAINES, M.D., of Bradford; Jefferson Medical College, 1889; aged 63; November 23, from a gunshot wound inflicted while he was cleaning a gun.

LOUIS M. JACOBS, M.D., of Philadelphia; Temple University Department of Medicine, 1921; former chief resident physician at the Mount Sinai Hospital; aged 29; November 1.

C. L. PARTRIDGE, M.D., of Ridley Park; Jefferson Medical College, 1874; chief of staff of the Taylor Hospital, Ridley Park; aged 74; November 11, of heart disease.

ROBERT P. LONG, M.D., of Mechanicsburg; Jefferson Medical College, 1878; formerly burgess of Mechanicsburg; aged 72; November 12, at the Physicians' Home in Canandaigua, N. Y.

HARRY H. BRUNER, M.D., of Central City; College of Physicians and Surgeons, Baltimore, 1895; formerly superintendent of the Somerset County Hospital, Somerset; aged 54; September 20.

JOSEPH GOLDSTEIN, M.D., of Philadelphia; Medico-Chirurgical College of Philadelphia, 1906; member of the Jewish Hospital staff; aged 46; November 9, from septic poisoning contracted from a patient.

JOHN F. CORCORAN, M.D., of Braddock; University of Vermont College of Medicine, Burlington, 1920; on the staff of the Braddock Hospital; aged 34; October 9, at the Atlantic City Hospital, of gastric ulcer.

ASA FENTON COPELAND, M.D., of Philadelphia; Hahnemann Medical College, 1913; veteran of the World War; aged 36; November 27, following an operation. He is survived by his widow and two children.

BAYARD T. DICKINSON, M.D., of Steelton; University of Pennsylvania School of Medicine, 1876; aged 73; November 30, after an illness of two years. Formerly State Assemblyman and Register of Wills of Dauphin County.

HOWARD D. GEISLER, M.D., of Philadelphia; University of Pennsylvania School of Medicine, 1899; chief of the medical staffs of the Germantown and Memorial Hospitals; former assistant at the Wills Eye Hospital; aged 49; November 12, of pneumonia.

RALPH M. NILES, M.D., of Nicholson; Medico-Chirurgical College of Philadelphia, 1899; eye, ear, and nose specialist; an adopted member of six different Indian tribes, including the Blackfoot, among whom he did much charitable work; aged 47; November 21, from injuries received in an automobile accident.

CLARENCE F. M. LEIDY, M.D., nose and throat specialist of Philadelphia; University of Pennsylvania School of Medicine, 1895; World War veteran; brother of Dr. Joseph Leidy, Penllyn, and a descendant of a long line of physicians and surgeons; aged 53; November 26, of heart disease, at the Walter Reed Hospital, Washington.

EDGAR T. SHIELDS, M.D., chief of the division of tuberculosis clinics in the State Department of Health, Harrisburg; University of Pennsylvania School of Medicine, 1906; aged 49; November 22. Dr. Shields was a missionary in China for more than six years. Upon returning to America, he taught for a time in the University of Pennsylvania, later becoming resident physician at Devitt's Camp, Allenwood. He took postgraduate work in the care of tuberculous patients at Saranac Lake, later serving as resident in charge of the Barlow Sanitarium at Los Angeles, Calif. In 1921 he became field secretary for the National Tuberculosis Association, serving in that post until his appointment to the Department of Health of Pennsylvania. His widow and six children, three sisters, and two brothers survive him.

Births

TO DR. AND MRS. DAVID N. KREMER, of Philadelphia, a daughter, October 20.

TO DR. AND MRS. LEO J. LAUX, of Sayre, a daughter, Mary Jane, at the Robert Packer Hospital, August 10.

TO DR. AND MRS. AMOS GOTTSCHALL, of Embreeville, a daughter, at the Harrisburg Hospital, November 18.

Engagements

MISS EMILY BASTIAN, of Allentown, and Dr. Claude B. Lerch, of Pottstown.

MISS EDITH MARGARET HANDY, and Mr. David Bushrod James, Jr., son of Dr. and Mrs. D. Bushrod James, both of Philadelphia.

MISS SARAH HIRSCH, daughter of Dr. and Mrs. Charles S. Hirsch, of Philadelphia, to Mr. Harold Frank of the same city.

MISS KATHLYN THOMAS, daughter of Dr. and Mrs. J. Quincy Thomas, of Conshohocken, to Mr. Paul Richard Groves, son of Mrs. Charlotte Groves, of Clarion.

Marriages

Miss Marjorie Reed to Dr. C. E. Ervin, of Danville, September 23.

Dr. J. H. Sandel, of Danville, and Mrs. Pierce at Nanticoke, November 1.

Dr. Henry Pohl, of Johnstown, and Miss Elaine Greenberger, of McKeesport, November 10.

Dr. Dwight Bailey Fuller and Miss Ellen Mitchell Fleming, both of Philadelphia, October 20.

Mrs. Margaret Latta Rees, of Philadelphia, to Dr. Nathan P. Stauffer, of Lansdowne, November 24.

Miss Anne M. Santee, daughter of Dr. and Mrs. G. O. O. Santee, of Cressona, to Dr. Martin O. Blechschmidt, of Frackville, October 27.

Miss Anne M. Strecker, daughter of Dr. and Mrs. Henry A. Strecker, of Philadelphia, to Mr. Louis Backe, Jr., also of Philadelphia, October 27.

Miss Margaret Elizabeth Coryell, of Mamaroneck, N. Y., to Dr. Milton E. Lowell, of Westfield, N. J. (a former practitioner in Pittsburgh, November 20.

Miscellaneous

Dr. W. Scott Piper, of Clearfield, has recovered from an operation for appendicitis.

Mrs. Edwin S. Huntsman, of Hulmeville, is recovering from a fractured leg.

Dr. Leo A. Nealon, of Scranton, has returned from New York where he took postgraduate work in anesthesia under Dr. Thomas Buchanan.

Dr. J. F. Buzzard has returned to Johnstown after taking four months' postgraduate work in diseases of the eye, ear, nose, and throat in Europe.

Five nurses were in the first class to be graduated from the training school for nurses at the State Tuberculosis Sanitarium at Hamburg recently.

Dr. Harry J. Bell, of Dawson, was elected to the State Senate of Pennsylvania at the recent election by an entirely unanimous vote, as he had the endorsement of all parties.

Dr. Robert H. Ivy, of Philadelphia, was elected vice-president of the American Association of Oral and Plastic Surgeons at its annual meeting held in Ann Arbor, Mich., November 11.

Dr. Frederick S. Baldi was elected President of the Philadelphia County Medical Society for 1927, and Dr. I. P. Strittmatter, President-Elect for 1928, at the annual meeting held November 17.

Dr. Charles Rea and family, of York, have returned from a three months' visit in Europe. They visited England, France, Belgium, Holland, Switzerland, and Italy, traveling mostly by motor.

Ground was broken October 28, for the new Clara P. Hartley Memorial Annex to the Women's Southern Homeopathic Hospital, Philadelphia. Dr. Wilmer Krusen, Director of Health, Philadelphia, was the chief speaker.

The Johns Hopkins University has received $200,000 from the General Education Board for a chair of medical history, the first in this country. Dr. William Henry Welch has been elected to fill the chair, and will grace it as none other can.

A bronze tablet, together with a portrait of the late Dr. J. Thompson Schell, founder and first president of the Northwestern Hospital of Philadelphia, was unveiled with appropriate ceremonies in the main entrance of the hospital on November 17.

Dr. Estes H. Hargis, graduate of the University of Pennsylvania, has been awarded the J. William White scholarship for conspicuously meritorious work during his fellowship in the Mayo Foundation. The scholarship entitles Dr. Hargis to study surgery in foreign countries.

Dr. and Mrs. William M. Guilford, of Lebanon, celebrated their seventieth wedding anniversary on November 12. Dr. Guilford is the oldest living graduate of the University of Pennsylvania, receiving his degree from the medical college in 1852. He is 94 years old and Mrs. Guilford is 91.

Dr. Joseph H. Schull, of Stroudsburg, who is not only a practicing physician but also a practicing lawyer, and who is the oldest county chairman in the State, had the distinction of being the only Democratic chairman to carry his county at the recent election for every candidate on the Democratic ticket.

The annual meeting and conference of the Pennsylvania Tuberculosis Society will be held in Scranton, January 25-26, 1927. The Lackawanna County Medical Society and the Scranton Council of Social Agencies are coöperating, and a program is being arranged that will be quite up to the high standard maintained during recent years.

On November 9, a dry clinic on goiter was held at the Locust Mountain State Hospital by Dr. H. H. Holderman and staff. Dr. Donald Guthrie, surgeon-in-chief of the Robert Packer Hospital, Sayre, was the guest of honor. The clinic was followed by a dinner and a short business session of the Schuylkill County Medical Society.

Dr. Norman A. Timmins is arranging to establish a hospital in Bedford, which will start with 25 rooms. A three-story building has been purchased by Dr. Timmins which will be remodeled for hospital purposes. Up to this time practically all hospital cases originating in the Bedford territory have been sent to the three Cumberland hospitals.

The recent announcement of the award of the 1926 Nobel Prize in Medicine to Professor Johannes Fibiger, Copenhagen, was premature. Cable dispatches from Stockholm state that no award of the Nobel Prize in Medicine will be made this year, as no work of sufficient merit to qualify has been brought to the attention of the Swedish Academy of Medicine.

The new Locust Mountain State Hospital at Shenandoah, which has been functioning a little less than six months, has made a splendid record. There were 480 admissions in this period of time, beside the large number treated at its dispensary. To date, 378 operations were performed, and during the month of August there were 82 operations with only one death following operation.

The United States Civil Service Commission, Washington, D. C., announces a competitive examination for junior medical officer (intern). Applications must be on file at Washington, D. C., not later than December 30. The examination is to fill a vacancy in the United States Veterans' Bureau Hospital, Camp Custer, Michigan, and vacancies in positions requiring similar qualifications.

The Boston Surgical Society in November conferred the Bigelow Medal on Dr. Rudolph Matas, the distinguished surgeon of New Orleans. This medal is awarded for the advancement of surgical knowledge, and was established eleven years ago. It was first given in 1921 to Dr. William J. Mayo, and in 1922 to Dr. W. W. Keen. The third award to Dr. Matas is for his triumph in the operative treatment of aneurysms.

The social-service department of St. Christopher's Hospital for Children, Philadelphia, has recently opened a neuropsychiatric clinic for children at that institution, according to the Mental Hygiene Bulletin. The clinic functions under the auspices of the hospital's department of preventive medicine. All medical, surgical, and laboratory work, except x-ray work, is carried out within the hospital.

THE UNITED STATES CIVIL SERVICE COMMISSION states that there is a vacancy in the position of specialist in pathology at the Veterans' Bureau Hospital at Knoxville, Iowa. The entrance salary is $3,800 a year. Promotion to higher grades may be made in accordance with the civil service rules. Full information and application blanks may be obtained from the United States Civil Service Commission, Washington, D. C.

THE TENTH ANNUAL INSPECTION of the Allentown State Hospital and joint meeting of the physicians of Bucks, Lehigh, and Northampton Counties was held at the State Hospital at Rittersville on October 24. One hundred and thirty-five physicians were in attendance. A tour of all the buildings was made, succeeded by a series of lectures on mental affections, which were demonstrated by clinical cases. A dinner followed.

THE VICTOR F. LAWSON AWARD for having "performed within the borders of Greater Chicago the most beautiful action or to have done the most beneficial thing for humanity," has been bestowed upon Dr. Herman N. Bundesen, Health Commissioner of Chicago. The award established in memory of its late publisher, Victor F. Lawson, was given by the *Chicago Daily News* in recognition of Dr. Bundesen's work for child health, and especially in the pure milk campaign which he inaugurated and carried through.

CAPSULES OF 1-PER-CENT NITRATE-OF-SILVER SOLUTION have been distributed to the State antitoxin distributors. This is in compliance with the Advisory Board regulation that "It shall be the duty of physicians and midwives attending women in confinement to instill in each eye of the newborn child as soon as practicable after birth, a 1-per-cent silver-nitrate solution, or other approved agent of like character, for the purpose of preventing the disease known as ophthalmia neonatorum." Free supplies may be obtained from the distributors.

THE MEMBERS OF THE ALUMNÆ ASSOCIATION of the Philadelphia General Hospital Training School for Nurses unveiled a tablet at the Philadelphia General Hospital, November 1, which was erected in recognition of the valued services rendered by Dr. Edward Parker Davis. The unveiling was participated in by Miss Roberta West, member of the first class to be graduated from the hospital, Dr. J. C. Doane, Dr. Wilmer Krusen, Dr. Herman B. Allyn, and Dr. Ward Brinton. The tablet was unveiled by the oldest member of the Alumni Association, Mrs. Kate Kirwin.

THE DIRECTORS of the Allegheny County Medical Society have authorized a series of extension courses to be given to any member of the County or State Society at a minimum fee. The first series began November 17, 1926, and will continue to February 3, 1927. Courses are being given in neurology, dermatology and syphilology, and contagious diseases. There will be four sessions in the course in Pediatrics, given on Mondays, beginning January 3, 1927, at the Children's Hospital. The time for the course in Diseases of the Heart has not yet been announced.

THE JOHNS HOPKINS UNIVERSITY celebrated its fiftieth anniversary October 22-23. The main events of the celebration were scientific addresses by representatives of English, French, and German universities; exercises commemorating the founding of the University in 1876; and the dedication of the new $1,000,000 building of the School of Hygiene and Public Health. Dr. Andrew Balfour, director of the London School of Hygiene and Tropical Medicine, delivered the dedicatory address on "Hygiene as a World Force," emphasizing the important part being played by preventive medicine in the progress of modern civilization.

THE HARMON FOUNDATION, 140 Nassau St. New York, supported by the American Red Cross, the Yale School of Nursing, the American Nurses' Association, the Bureau of Nursing Education, the Henry Street Settlement, and a large number of similar organizations, is making a study of plans for pensioning nurses. The details have not as yet been made public, but a proposal has been made that nurses, during their periods of employment, pay one dollar a week, and that private patients be taxed a two-dollar a week surcharge, and and that this will provide a fund sufficient to give the nurses who subscribe to the plan a retirement annuity amounting to $1,400 yearly at the end of thirty years.

OFFICERS OF THE ANTITUBERCULOSIS SOCIETY of Schuylkill county recently announced their intention of making an immediate appeal to the State Supreme Court from the decision of the Schuylkill county court declaring the act providing for the erection of a hospital for tuberculosis patients unconstitutional. Officers of the society have been notified that the higher court will hear the case at once. Every county in the State will be affected by the decision.

The citizens of Schuylkill county at a general election several years ago voted $200,000 for the project, but the local society has encountered legal technicalities at every step, although several counties have built hospitals under the law now declared unconstitutional.

DR. FRANKWOOD E. WILLIAMS, Medical Director of the National Committee for Mental Hygiene, has stated that the Commonwealth Fund has decided to appropriate the sum of $490,000 next year for various mental-hygiene projects, an appropriation likely to be renewed and even increased in succeeding years. He also announced a new gift to the National Committee from the Rockefeller Foundation of $40,000 for fellowships for the training of psychiatrists, psychologists, and psychiatric social workers in community mental-hygiene technic and methods. The following are officers of the Committee: Dr. Charles P. Emerson, Indianapolis, president; Bishop William Lawrence, of Massachusetts, Dr. James R. Angell, president of Yale University, and Dr. Bernard Sachs, of New York, vice-presidents; Mr. Clifford W. Beers, secretary; and Mr. Frederic W. Allen, New York, treasurer.

THE PHILADELPHIA WORLD CONFERENCE on Narcotic Education on July 8th last, adopted a constitution creating a permanent world organization entitled the "World Conference on Narcotic Education," the spirit and purpose of which are set forth in the preamble: "We, the people of the world, in order perpetually to protect society everywhere from the peril of narcotic drug addition by applying the power of truth through education, do ordain and establish this constitution for humanity." The Board of Governors of this World Conference on Narcotic Education has adopted a resolution calling for a week to be observed throughout the world as Narcotic Education Week, the last week in February of each year, and inviting individuals and organizations to adopt such measures as they may deem necessary and advisable for observing this week in the extension of narcotic education.

A CAMPAIGN TO RAISE $200,000 for a chair of operative dentistry at the University of Pennsylvania was recently opened by the Philadelphia Alumni of the University's School of Dentistry. The chair is to bear the name of Dr. Edwin T. Darby, emeritus professor of operative dentistry at the University, a pioneer in the field of dental education, who at the age of 81 is still actively working for the school. The proposed chair will be the first founded at the University devoted exclusively to dental instruction, and one of the first of its kind in the world. It will give unlimited opportunity for research work along lines that are purely operative as well as for similar work which may be done in collaboration with the heads of other departments. Graduates of the School of Dentistry all over the world are expected to contribute to the fund, the plan of the campaign providing for the organization of alumni groups in this country and abroad.

THE WOMEN'S MEDICAL COLLEGE OF PENNSYLVANIA has announced a campaign for $1,500,000 to enable it to enlarge its facilities, and to make room for more of

the applicants it is forced to reject every year because of cramped space and limited endowment. This is the initial step in a fund-raising effort which will probably extend over a number of years, to construct upon a new site a complete medical center for the education of women physicians. The plant will eventually consist of a college building equipped to care for 200 students, double the present capacity, a hospital with an ultimate capacity of 250 beds, a student's dormitory, and a nurses' home.

A distinctive feature of the college plan as outlined calls for the development of a health clinic and preventive-medicine department which will serve not only as a training ground for women physicians wishing to specialize in this important field of practice, but will help materially in educating the public regarding disease, disease prevention, and hygiene. The department planned will provide facilities for complete physical examination as well as the necessary advice and equipment in carrying out corrective health measures at a low cost to the individual.

THE GRADUATE NURSES' ASSOCIATION of the State of Pennsylvania held its twenty-fourth annual convention in Philadelphia in October. The Pennsylvania League of Nursing and the Pennsylvania Organization for Public Health Nursing met in joint sessions. Miss Ida Butler, associate director of nursing for the National Red Cross, stated that "The Red Cross needs 150 new nurses every month for its work in the United States, and throughout the world, and cannot get them." Alice Carr, "who cleaned up malaria in Corinth and Greece," and Edith Winchester "who saved the lives of 15,000 Armenian orphans," were held up before the nurses as distinguished heroines of their profession. There are 2,800 Red Cross nurses in Pennsylvania, which is less than should be.

Dr. Frederick Allen, director of the Child Guidance Clinic of Philadelphia, urged special psychiatric and psychologic training for nurses to enable them to take better care of their patients.

Inadequate living conditions and equipment and the nonemployment of graduate dietitians in many of the 160 nurses' training schools in Pennsylvania were cited by Miss Anne Wray, Educational Director of the State Board of Examiners for Registration of Nurses. The opportunities of graduate nurses for postgraduate work at universities in the State were outlined in a special committee report.

Mrs. Marie C. Eden, of the Presbyterian Hospital, Philadelphia, was reëlected president of the Pennsylvania State League of Nursing Education. Miss Helen C. Greaney, of Philadelphia, was elected president of the Graduate Nurses' Association of the State of Pennsylvania. The 1927 convention of this Association will be held in Erie.

AN AGREEMENT providing for systematic health supervision of employees has been entered into between nineteen industrial firms of the city and the Philadelphia Health Council and Tuberculosis Committee. Upwards of 4,000 employees will have the benefits of this service. Preliminary surveys have been made and work already begun in a number of plants on December 1. The arrangement for industrial health service is the outcome of plans adopted by the Health Council nearly a year ago and of experimental work carried on since that time in certain plants. The plants included in the agreement have been grouped for administrative purposes into four units with approximately 1,000 employees in each. An industrial nurse is assigned to each unit and the medical service needed will be made available for each plant. A minimum of three hours per week for each 100 employees is provided. Physicians and nurses will make daily or semiweekly visits to the plants. They also will respond to emergency calls. Dispensaries and first-aid rooms are to be instituted by each firm, fully equipped for the treatment of minor accidents and illnesses occurring at the plant. The medical work of the units will be done by Drs. W. J. McConnell and Glenn S. Everts, of the Health Council staff. Yearly physical examinations of all employees will be made and of all new employees. Sanitary surveys of plants and regular inspections of working rooms as to lighting, ventilation, and sanitation will be made. Classes in first-aid in sickness and accidents, and health-education activities are a part of the plan. The cost of the health service is to be shared by the firms participating, according to their size, and by the Health Council. The plants are to provide and equip clinic and dispensary rooms and pay for the services of physicians and nurses. The Health Council has done the preliminary organization, and will provide medical and operating supervision, records, and the educational features of the service. When the joint service has been thoroughly established in any unit so as to make it practicable, an organization among the plants will be effected so that the plants can themselves take over and continue the service. This will enable the Health Council to extend the plan to other industries.

NORTH AMERICAN PHYSICIANS ARE INVITED TO VISIT THE CLINICS OF EUROPE AGAIN IN 1927

In May, 1927, a group of physicians with members of their families from the United States and Canada, under the direction of the Inter-State Post Graduate Medical Association of North America, will sail from New York to visit the following leading medical centers of the Old World: London, Edinburgh, Oslo, Stockholm, Upsala, Lund, Copenhagen, Hamburg, Leipzig, Munich, Strasbourg, Heidelberg, Frankfort, and Paris.

This will be the third year that foreign assemblies have been conducted under the auspices of this organization. Those of 1925 and 1926 were exceedingly successful and of great benefit to the physicians who took advantage of them.

In including Norway, Sweden, and Denmark in the itinerary, the Association is offering the profession an exceptional opportunity to visit and study in some of the finest clinics in the world.

The group of physicians will be limited to a number that can be comfortably accommodated in the clinics, which will cover the entire field of medical science.

The price of the trip will be kept as low as possible and yet furnish first-class acccommodations. It will be between $1,000 and $1,100. All physicians who are in good standing in their state or provincial society may register. Further information may be obtained from the Managing-Director, Dr. William B. Peck, Freeport, Ill., or the Travel Department of the American Express Company, 65 Broadway, New York, N. Y., which has charge of the transportation.

RESOLUTIONS ADOPTED BY THE PNEUMONIA COMMISSION, DEPARTMENT OF PUBLIC HEALTH, PHILADELPHIA, SEPTEMBER 30, 1926

WHEREAS, the city of Pittsburgh and other cities have already established a quarantine for pneumonia with results that are encouraging though insufficient to be conclusive, and

WHEREAS, the Pneumonia Commission has been requested to consider the advisability or inadvisability of establishing a quarantine for pneumonia in Philadelphia, and

WHEREAS, a large proportion of the cases of pneumonia are preceded by infectious colds, during which time the organisms incident to pneumonia may be communicated to others; therefore be it

Resolved, that the Pneumonia Commission urge upon the Director of the Department of Public Health to call the attention of the medical profession of the city of Philadelphia to the State law which requires *reporting* of pneumonia, with a view of obtaining the coöperation of all physicians having pneumonia cases under their care,

That physicians be requested to instruct the members of the family in which pneumonia exists regarding the infectious character of the disease and upon the desir-

ability of the complete isolation of the patient and avoidance of unnecessary contact with other members of the household,

That the Department of Public Health be prepared to coöperate with the family physician in carrying out the details of hygienic management by rendering, at the physician's request, whatever help may be necessary to accomplish that end,

That the Department of Public Health prepare and issue a circular of information regarding the home care of pneumonia, which should be sent to every physician reporting a case of pneumonia, with the request that the same attending physician leave this circular at the home of the patient; that this circular contain information concerning the nursing of the patient, disposal of sputum, ventilation of the sickroom, and conduct of others who must come in touch with the patient.

It was the sense of the Pneumonia Commission that the time for establishing official quarantine for pneumonia in Philadelphia had not yet arrived.

BOOKS RECEIVED

GENERAL MEDICINE. The practical medicine series, comprising eight volumes on the year's progress in medicine and surgery. Under the general editorial charge of Charles L. Mix, A.M., M.D. Edited by Drs. George H. Weaver, Lawrason Brown, Robert B. Preble, and Ralph C. Brown. Series 1926. Chicago: The Year Book Publishers, 304 S. Dearborn St.

THE SURGICAL CLINICS OF NORTH AMERICA. Issued serially, one number every other month. Volume VI, Number IV (Mayo Clinic Number—October, 1926). 274 pages with 91 illustrations. Per clinic year (February, 1926, to December, 1926). Paper, $12; cloth, $16, net. Philadelphia and London: W. B. Saunders Co.

THE MEDICAL DEPARTMENT OF THE UNITED STATES ARMY IN THE WORLD WAR. Volume XIV. Medical Aspects of Gas Warfare. Prepared under the direction of Maj. Gen. M. W. Ireland, the Surgeon General. Washington: Government Printing Office, 1926.

THE PROSTATE GLAND. By Chester Tilton Stone, M.D., formerly of Urological Staff, St. Luke's Hospital, Woman's Hospital, Postgraduate Hospital, New York City. Illustrated with two drawings by the author. New York: Allen Ross & Co., 1133 Broadway. Price, $1.50 net.

GENERAL INDEX VOLUME OF THE MAYO CLINIC PAPERS. A collection of papers of the Mayo Clinic and the Mayo Foundation—1884 to 1925 inclusive. Octavo volume of 227 pages. Philadelphia and London: W. B. Saunders Company, 1926. Price, cloth, $5 net.

PHYSICIAN'S DIARY, 1927. 6½ by 3¾ inches in size. Handsomely bound in flexible leather substitute, with gilt edges. Prices are for 30 patients per week, $1.75; for 60 patients, $2; for 90 patients, $2.50. New York: William Wood & Co., 51 Fifth Ave.

CHEMOTHERAPY; With Special Reference to the Treatment of Syphilis. By John A. Kolmer, M.D., Dr. P.H., Professor of Pathology and Bacteriology in the Graduate School of Medicine, University of Pennsylvania. 1,106 pages with 82 illustrations. Philadelphia and London: W. B. Saunders Company, 1926. Price, cloth, $12 net.

HUMAN PATHOLOGY. A textbook by Howard T. Karsner, M.D., Professor of Pathology, School of Medicine, Western Reserve University, Cleveland, Ohio. With an introduction by Simon Flexner, M.D. 20 illustrations in color and 443, black and white. Philadelphia and London: J. B. Lippincott Company. Price $10.

THE MEANING OF DISEASE. An inquiry in the field of medical philosophy. By William A. White, A.M., M.D. Baltimore: The Williams & Wilkins Company, 1926. Price $3.

REPORT ON THIRD INTERNATIONAL CONGRESS OF MILITARY MEDICINE AND PHARMACY. Paris, April, 1925. By Commander William Seaman Bainbridge, M.C. Reprinted from the Military Surgeon, May to August, 1926, inclusive. Washington, D.C.

BOOK REVIEWS

From a reviewer we expect information and advice which will guide us safely and to our profit, warning us of the poor, the mediocre, the commonplace, and inviting our attention to merit.

BIRTH CONTROL AND THE STATE. By C. P. Blacker, M.C., M.A., M.R.C.S., L.R.C.P. E. P. Dutton & Company, 681 Fifth Avenue, New York, N. Y.

This "thought-compelling" little volume discusses briefly, but with extreme clearness and fairness, the arguments for and against birth control—what birth control really is and what it might mean to the individual and to the race. The responsibility of the medical profession and of the state are meticulously elaborated. It is the writer's opinion that some sort of unification of the human race is the only practical solution of the problem of recurring world wars which obviously threaten the extinction of civilization. Thus far, there is little evidence of any ethical unification as yet attained. That which is biologically good is moral. A restriction of human fertility at the present time is biologically demanded. The fertility of the more desirable members of the human race should be encouraged in every possible way, and selfishness and personal indulgence are to be correspondingly discouraged. The fertility of the undesirable classes—criminals, drunkards, and the mentally deficient—must be curbed by law, legal sterilization being favored.

Our biological criterion of racial fitness and our standards for judging a nation's worth must be one and the same if we are to have ethical unification of the race. Joy in living is the common right of all, and should be our aim. It would bring contentment with the lower stations in life and make for social harmony. Practical religious unification is essential to ethical unification. It has long been recognized that a church militant may be exceedingly unethical. A religion, too, which is distinctly tribal or national, is abiological.

This little book is highly recommended for its thoughtfulness and its earnest altruism.

MATERIA MEDICA AND THERAPEUTICS, INCLUDING PHARMACY AND PHARMACOLOGY. By Reynold Webb Wilcox, M.A., M.D., LL.D., D.C.L. Eleventh Edition. Revised in accordance with the *U. S. Pharmacopeia, X*, with index of symptoms and diseases. P. Blakiston's Son & Co., Philadelphia. 798 pages. Price, $5 net.

The eleventh edition of this standard work has been revised in accordance with the last revision of the *U. S. Pharmacopeia*. The cross-index reference used by the author is easily followed, and makes the work a convenient one for ready reference. All opinions expressed are along conservative lines, but have an authority backed by years of observation on the part of the author so that his findings and recommendations are always worthy of credence. The book is recommended to practitioners and students.

SURGICAL ANATOMY. By John B. Deaver, M.D. Emeritus John Rea Barton Professor of Surgery, University of Pennsylvania. Second edition. In three volumes. Vol. 1. Philadelphia: P. Blakiston's Son and Co. Price $36 for the three volumes.

This volume discusses the surgical anatomy of scalp, cranium, brain, face, mouth and throat, and organs of

sense, in the order mentioned. This, the second edition, is largely revised and rewritten, and much that is new is added. Unfortunately, typographical errors are present, and in one instance, at least, this leads to anatomic inaccuracy.

The whole volume is written in the terse, lucid style characteristic of the teachings and writings of the author. A plan of bridging the difficulty of the transition of anatomic nomenclature has been adopted by putting the Basle terms in italics in juxtaposition with the old terms. This makes easier reading for all users of the book.

The directions for each dissection are explicitly given, and the principles of surgical invasion follow in logical order, so that the text is a real guide. It will prove again to be a popular work. The text on the cranial nerves, the brain, and its coverings is an outstanding feature. This volume may be placed in the hands of undergraduates, practitioners of medicine and surgery, and specialists, with confidence that close perusal will well repay the reader.

EXPERIMENTAL PHARMACOLOGY. A textbook for students and physicians. By Dr. Hans H. Meyer, Professor of Pharmacology, University of Vienna, and Dr. R. Gottlieb, Late Professor of Pharmacology, University of Heidelberg. Second edition in English, translated by Velyien E. Henderson, Professor of Pharmacology, University of Toronto, from the seventh revised German edition. 87 figures, partly in colors, and 2 colored plates. Philadelphia and London: J. B. Lippincott Company. Price, $7.00.

In this well-known textbook a somewhat novel mode of classification of the different drugs is employed in that they are grouped strictly according to the system and organs acted upon and not according to a botanical classification or the pharmacodynamic actions alone. The subject of pharmacology is thus approached from the standpoint of the physiology and the pathologic condition of each organ or system. With these as a basis, it is shown how the corresponding functions may be altered by the use of certain drugs. There are a number of advantages and no conspicuous disadvantages to this plan for the purposes of general instruction and for certain lines of research. The reader who wishes to obtain a complete review of a particular drug, however, will in some instances find that he must turn to several places in the book in order to obtain the information sought. Thus, in the case of physostigmin, he will have to refer to one place for the action on the bronchial muscles, elsewhere for that on the central nervous system, elsewhere for the intestine, the salivary secretion, the sweat secretion, the interocular (sic.) pressure, etc. The excretion of mercury is taken up in five different places in the book, relating, respectively, to the bile, the intestine, the milk, the saliva, and the urine.

In general, the work is a very sensible exposition of the subject of pharmacology. The title at the back of the book, "Experimental Pharmacology," is perhaps a little misleading, in that from this title one would expect it to deal with the details of the technic of pharmacologic experimentation, which it does not do to any marked extent. Such a title as "Pharmacology as a Basis for Therapeutics" would more nearly represent the contents of the book and reflect its actual suitability for the needs of the practitioner.

In the seventh German edition, from which the present translation was made, several of the sections had been rewritten; viz., those dealing with the central nervous system, the sensory endings, the genital organs, the kidney, metabolism, and the causes of disease. In the present English edition an endeavor has been made to conform to the new tenth edition of the U. S. Pharmacopæia, but not always successfully, since powdered opium is mentioned as Pulvis Opii (now Opium pulveratum) and the new appellation for hexamethylenamin, viz., methenamin, does not appear. Following are some errors noticed in perusal of the book: ophiophagia for opiophagia (p. 51); somnifin for somnifen (p. 110); hemalolytica for hematolytica (p. 201); cheledonine for chelidonine (p. 214); myxodema for myxedema (pp. 428 and 429). Novasurol appears correctly in the text, but is spelled novasural in the Index.

The book as a whole contains much that is of interest, and in most respects is well calculated to serve as an introduction to therapeutics.

THE DIABETIC LIFE; ITS CONTROL BY DIET AND INSULIN. A concise practical manual for practitioners and patients. By R. D. Lawrence, M.A., M.D., Chemical Pathologist and Lecturer in Chemical Pathology, King's College Hospital. Second edition with 11 illustrations. Philadelphia: P. Blakiston's Son & Company.

The difficulties in the management of diabetics are caused not only by the unwillingness of the patients to change their life-long habits and exercise self-control, but in a very large measure by the unpreparedness on the part of the physician who is not a specialist on the subject to give explicit directions as to the diet, preparation of the food, medication, examination of the urine, and other essentials of the diabetic regimen. It has been our experience that the average diabetic in private practice can be managed much more successfully by placing in his hands a book of the type before us.

The following table of contents shows the scope of this treatise: A comparison of normal and diabetic metabolism. The causation and pathology of diabetes and the discovery of insulin. The symptoms of diabetes. Diagnosis and blood-sugar tests. The action of insulin on blood sugar. The principles of treatment before and after insulin. A simple modern diet. The lineration scheme. Treatment by diet and insulin. Some controversial questions: starvation; ideals of treatment; ideal weight; is insulin a cure? Prognosis. Insulin injections. Hypoglycemia and its treatment. The treatment of coma. The treatment of children. The treatment of variations and complications. The treatment of operations and gangrene in diabetics. Miscellaneous: edema; diuresis; pigmentation of the skin; alcohol; the omission of insulin. The choice and management of diet. Special "diabetic" foods and recipes. The essentials of a diabetic education. The five-gram diet scheme and food tables. An appendix follows giving a list of forbidden food, directions for testing of the urine, various tables, etc.

The treatment of the subject is brief and comprehensive, and even the chapters intended for the physician are written in a manner to be readily understood by an intelligent layman. We approve of this manual and recommend it to our readers.

MODERN METHODS OF AMPUTATION. By Thomas G. Orr, A.B., M.D., F.A.C.S., Professor of Surgery, University of Kansas. 125 illustrations, and 114 pages. St. Louis: C. V. Mosby Company, 1926.

The author presents a fully illustrated working manual covering every modern aspect of arm and leg amputations. Special chapters are given to cinematoplastic amputations and artificial leg fitting. He stresses the point that postoperative function is the test of a successful amputation, and that "the job is not finished until the patient is fitted with an artificial limb."

The chapter on general considerations gives concise directions for the management of each tissue. methods of drainage, suturing, and stump dressing. The chapter on stumps deals with immediate complications and remote pathology. The section on special amputations takes up for each region the operation of choice, type of flaps, bone shaping, muscle and fascia suturing, and after care.

It is a pleasure to note that Dr. Orr has weeded out the tiresome procession of proper names and obsolete procedures which made amputations a nightmare of our student days, and has condensed his subject into the concise, practical treatise which the busy surgeon demands.

BRAINS OF RATS AND MEN. A survey of the origin and biological significance of the cerebral cortex. By C. Judson Herrick, Professor of Neurology, the University of Chicago. Chicago: The University of Chicago Press.

"Rats are not men" is the first sentence of the last chapter. "Men are bigger and better than rats" is the last sentence. The implications of this thesis, Prof. Herrick states, furnished the motives of his discussion in this most interesting book. A critical analysis is made of the phylogenesis of the cerebral cortex, tracing its development from the lowest of the mammalian scale to its culmination in the human brain. Animal and human behavior in its relation to the cortex is the keynote of the study, which is most skillfully elaborated. The rat is given such a prominent place because its behavior has been more intensively studied under laboratory control than other animals low in the mammalian scale.

Prof. Herrick endeavors to remove all thought of mysticism and metaphysical forces as underlying human conduct, and pleads that it be examined only by the scientific method of natural science. The methods used are objective psychology, introspective experience, and comparative neurology. He states that evidence is biologically adequate that mind (awareness) as we know it phenomenally is a function of a particular configuration of bodily organs. The great complexity of human behavior, its flexibility, and the intricacies of the mind are directly related to the enormous development of the cerebral cortex, particularly the association mechanism.

The book is of a highly specialized character, and should be attractive to those interested in psychology, anthropology, social sciences, and the allied medical sciences. It is of no practical value to the general practitioner of medicine.

THE ROCKEFELLER FOUNDATION INTERNATIONAL HEALTH BOARD. Twelfth Annual Report. January 1 to December 31, 1925. 61 Broadway, New York, N. Y. Pp. 229.

The world activities of the Rockefeller Foundation are exemplified in this very concise report which shows in brief outline the world-wide surveys made to banish malaria, hookworm, and yellow fever in particular, from all parts of the globe. Coöperation with state and national health organizations is an outstanding feature, this in turn conveying its ramifying benefits in its application to rural health organizations. Results of hookworm and malaria treatment are likewise recorded, and valuable suggestions offered to the clinician who is called upon to treat these diseases. The report should be in the hands of all health officials even though they may not be in direct zones of contact as, by reason of large and rapid transportation now available, some of these dread diseases could be implanted upon virgin soil and thus give rise to dire effects.

TRANSACTIONS OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA. Third series. Volume XLVII, 844 pages. Printed for the College, 1925.

This issue follows the usual outline of the large number of the transactions that have been printed. There is a rich variety of subject matter covered in the six pages of index and contents, together with much historical data. The book can be looked upon as a reliable index to the latest discoveries and observations in medicine, surgery, and the specialties.

ELEMENTS OF METABOLISM. Metabolism Testing, What is Normal? Conspectus of Metabolism Queries, Tables for Computations. By Frank B. Sanborn, formerly Professor in Tufts College. Sanborn Company, Publishers, 26 Lansdown Street, Cambridge, Mass. Pp. 56.

This small brochure represents a question-and-answer outline in the nature of a quiz compend, and affords considerable information about basal metabolism. It is up-to-date, and the statements made can be safely accepted.

LABORATORY OUTLINE IN BACTERIOLOGY AND IMMUNOLOGY. By John F. Norton, Ph.D., and I. S. Falk, Ph.D., Associate Professors of Bacteriology, the University of Chicago. Chicago: The University of Chicago Press.

This little book consists of two-hour laboratory exercises which, the author states, should be pursued only under the direction of a competent instructor. It seems, however, to be of such character as to enable an intelligent man, with preparation now required of medical students, to proceed by himself or with occasional assistance on the part of one of greater experience. Naturally it should be used in conjunction with some standard textbook of bacteriology and serology, to which frequent reference should be made.

POLITZER'S TEXTBOOK OF THE DISEASES OF THE EAR. Sixth edition. Revised, and largely rewritten by Milton J. Ballin, M.D., Ph.B., Attending Oto-Rhino-Laryngologist, Bronx Hospital, New York City. 302 illustrations. Philadelphia: Lea & Febiger, 1926. Price, $10.00.

This sixth edition of "Diseases of the Ear" by that distinguished clinician, Dr. Adam Politzer, has been entirely rewritten and much new material added, especially on the labyrinth or internal ear. It is a well-rounded work in which pathology and treatment are especially well considered.

The illustrations, while fairly numerous, from the standpoint of an American textbook are not up to the standard, and leave much to be desired. All in all the work is a credit to the name of its illustrious author.

MEDICAL GYMNASTICS AND MASSAGE IN GENERAL PRACTICE. By Dr. J. Arvedson, Arvedson's Gymnastic Institute, Stockholm. Translated and edited by Mina L. Dobbie, M.D., B.Ch., Medical Officer, Chelsea College of Physical Education. Second Edition. P. Blakiston's Son & Co., Philadelphia. Pages 1 to 284, inclusive.

This work follows the outline of a quiz compend on medicine, rather than offering information and suggestions as to procedures in the use of gymnastics and massage in general practice. Adherence to the use of "phthisis" in place of "tuberculosis," together with other words here and there, suggests that universality of revision has not been followed. The treatment of chronic eczema by massage is far-fetched.

The book scarcely fulfills its intended message.

THE SURGICAL CLINICS OF NORTH AMERICA. Volume VI, No. 3 (Lahey Clinic Number), June, 1926. 214 pages with 54 illustrations. Per clinic year, paper $12; cloth, $16 net. Philadelphia and London: W. B. Saunders Company.

This issue contains much that is practical for the general surgeon. The subjects treated include goiters, diseases of the gall bladder, biliary tract, blood vessels, alimentary tract, and some surgical complications. Consideration is given to diagnosis, treatment, technic, and after-treatment. There are also reports on the use of spinal anesthesia and ethylene. The book is well worth perusal by any general surgeon.

ELEMENTS OF PATHOLOGY. By Aller G. Ellis, M.Sc., M.D., Rockefeller Foundation Visiting Professor of Pathology and Director of Studies, Medical Department of Chulalongkorn University, Bangkok, Siam. 95 illustrations. Philadelphia: P. Blakiston's Son & Co. Price, $5.

The title chosen by the author, "Elements of Pathology," may be a little misleading, for as one turns over the pages of the book he discovers that an attempt has

(Continued on page xvi.)

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BOOK REVIEWS

(Continued from page 208.)

been made to cover the whole subject of pathology in the limited space of a little more than 500 pages. The question immediately arises, can this be adequately done with reference to the needs of the modern student of medicine, and inevitably the feeling follows that it cannot. This is not, however, a reflection upon the text itself, as the writing is excellent, the subjects well selected, the space well apportioned, and the descriptions clear, but is the consequence of its brevity, which makes it resemble a "Quiz Compend" rather than a modern textbook. For those who are contented to know the elements of the subject, the book will no doubt prove adequate, but for the students now attending first-class medical schools it would seem to be inadequate.

CANNULA IMPLANTS AND REVIEW OF IMPLANTATION TECHNICS IN ESTHETIC SURGERY. By Charles Conrad Miller, M.D. Chicago: The Oak Press, 358 W. Madison Street.

The subject matter of this entire book could be condensed into a small monograph in one of the current journals. The statement that paraffin in the correction of nasal defects is contraindicated is true, but this is equally true for the injection of rubber compounds. The book is written to show the value of rubber compounds for the correction of facial deformities. This is not substantiated, as no final results are given, and no photographs shown to prove the conditions before and after. The final statement in the book summarizes the situation: "For the present patients should be told that these methods are not as yet recognized as established surgical procedures."

PRACTICAL MATERIA MEDICA AND PRESCRIPTION WRITING. By Oscar W. Bethea, M.D., Ph.G., F.C.S., Professor of Clinical Therapeutics, Tulane School of Medicine. Fourth edition revised. Illustrated. Philadelphia: F. A. Davis Company, 1926. Price, $4.50 net.

The author conveniently begins his work with a list of medical terms and their definitions which is a great assistance to the student and an aid to the busy practitioner who has allowed the cobwebs to accumulate on the gray cells.

Part one takes up alphabetically the principal remedies used in the treatment of the sick, giving the derivation of each, its form, odor and taste, solubility, therapeutic action, use and dose, and combination with other medicaments, giving a prescription by way of illustration.

In part two very plain instructions are given in the weights and measures used in prescription writing, and physician and pharmacist are admonished to stand close to one another, each as the protector of the other.

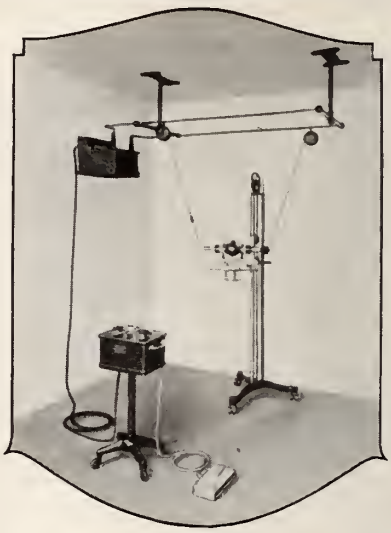
This work may be considered a masterpiece for the lazy student, but a comparatively useless volume to the man who keeps himself informed and up with the times.

THE DUODENAL TUBE AND ITS POSSIBILITIES. By Max Einhorn, M.D., Professor of Medicine at the New York Postgraduate Medical School. Second edition, revised and enlarged. Illustrated. Philadelphia: F. A. Davis Company, 1926. Price, $3 net.

This is the monograph of a master in gastro-enterology, whose mind is fertile, and whose mechanical ability is versatile. The book is easily read, containing largely the author's personal experience and theories. The historical sketch is brief. There are several new additions augmenting the details of technic. The work embraces all of the material in the first edition of 1920, together with 84 new pages.

The chapter on duodenal contents includes fractional examination in peptic ulcer and a new estimation of

(Continued on page xviii.)



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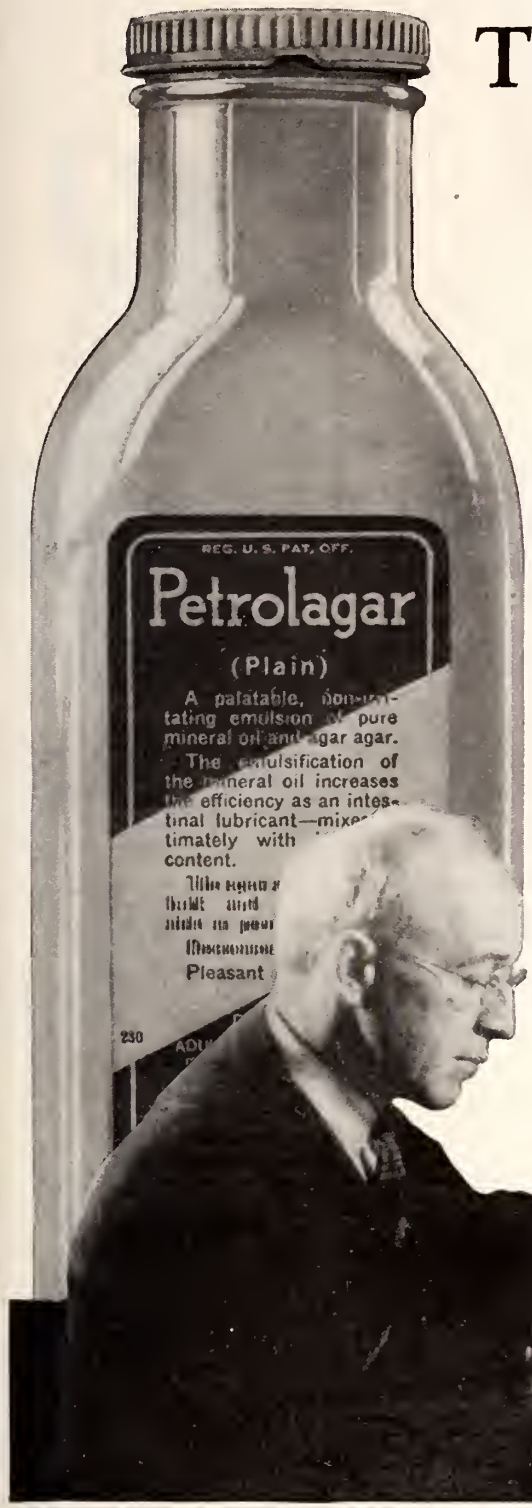
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BOOK REVIEWS

(Continued from page xvi.)

bile or biliary pigment. No mention is made of the Bassler or Bondi pancreatic functional tests. The author incorporates considerable new material relative to the liver, gall bladder, and biliary ducts. He still adheres to his original technic in obtaining bile, the theory of which is not conclusive. Gross and microscopic descriptions of the bile, together with case records cover 47 new pages and 46 new drawings.

Under duodenal alimentation he includes the siphonage principle, and as two new indications, operation on the throat and esophagus, and postdiphtheritic paralysis. Duodenal treatment of arthritis deformans, and anesthesia by ether injection, also instillation of sodium-tetraiodophenolphthalein are new. Dr. Stetten elaborates on the surgical value of the duodenal tube. Diagnosis of cardiospasm and pylorospasm merits the consideration of the intestinal delineator. The utilization of the jointed intestinal tube covers 17 new pages and 11 new illustrations.

PATHOLOGY AND TREATMENT OF THE INFLAMMATORY DISEASES OF THE NASAL ACCESSORY SINUSES. By Professor Dr. M. Hajek, Chief of the Laryngo-Rhino-Otological Clinic, University of Vienna. Translated and edited by Joseph D. Heitger, A.B., M.D., Louisville, Kentucky; and French K. Hansel, M.D., M.S., St. Louis, Missouri. Fifth edition, completely revised, and enlarged. Volumes I and II. St. Louis: The C. V. Mosby Company. Price, $17 per volume.

To the rhinologist, whose reading of medical German is not facile, the translation of the fifth German edition of Hajek's work into English is a most valuable service. The volumes are well printed, in easily read type, on good paper. The translators have done their work well, and the English text follows that of the German accurately.

The present edition varies from the fourth in the elimination of case histories in large number. This detracts from its value to the student, but the details added increase its usefulness to the advanced practitioner.

Indications for minor and major operations have greater attention and represent the Vienna school thoroughly. Anatomic details are considered thoroughly, but not so much as in preceding editions. Pathologic anatomy and pathologic diagnosis, however, are treated more exhaustively, with many new figures of illustration to illuminate the text. Roentgen-ray diagnosis is given special mention. A number of excellent roentgen-ray plates with accompanying explanatory diagrams are found at the end of volume 1. These should be of no little value to the rhinologist who depends for the reading of his plates entirely upon the roentgenologist.

An extensive bibliography of the most important literature published since the fourth edition concludes the work.

FRESHMAN HYGIENE. Personal and social problems of the college student. By Raymond C. Bull, A.B., M.D., Director of Student Health Service, Lehigh University; and Stanley Thomas, M.S., M.A., Associate Professor of Bacteriology, Lehigh University. Philadelphia and London: J. B. Lippincott Company. Price, $2.

This book has been written, as the title implies, to help the student entering on his college life. It meets the student's problems in a clear and concise discussion of the essentials in the everyday life of the average student which promote health.

The chapters on ventilation and colds are exceedingly helpful, while those on social hygiene furnish the student with knowledge which will prove a valuable guide when he finds himself suddenly launched in a new environment away from the influences and restraints of home and restricted associations.

(Concluded on page xx.)

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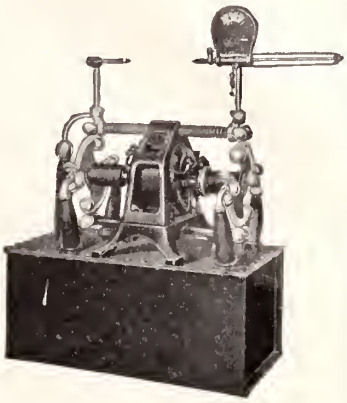
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BOOK REVIEWS

(Concluded from page xviii.)

HEALTH THROUGH PREVENTION AND CONTROL OF DISEASES. By Thos. D. Wood, M.D., College Physician and Advisor in Health Education, Teachers College, Columbia University; and Hugh Grant Rowell, M.D., Physician, Horace Mann Schools, Teachers College, Columbia University. Pp. 119. Chicago, Ill.: World Book Company, 1925.

The title page states that the authors have developed a systematic program for the prevention of contagious diseases among school children and that they have made available for the first time, under one cover and in clear-cut form for use in schools, the best methods of procedure and the best scientific basis for disease control. The reviewer concurs.

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THE BLAIR BELL TREATMENT OF CANCER*

FRANCIS CARTER WOOD, M.D.
NEW YORK, N. Y.

The Blair Bell treatment of cancer is an interesting and new thing in its present form. But if you examine this little book which was printed in London in 1769, and is a translation of Goulard's French text on the extract of Saturn (the old Goulard's extract we still use), you will find a chapter devoted to the treatment of cancer with lead. In other words, like everything else, treatment with lead is not so very new. Of course Goulard is very amusing. He has a number of testimonials—the kind we are accustomed to see from quacks—"Extract of Saturn is wonderful; my cancer has disappeared; pray send me some more of it," etc. He has a whole series of these, giving the patients' names and social position and other information. No doubt lead acetate spread over an ulcerated surface did act as an astringent and the lesion improved, and if the patient had tuberculosis or syphilis or any chronic ulcerative process, no doubt great benefit could be obtained. But we know today that it would not do a thing to a real cancer.

Blair Bell started on a more scientific basis. He had noticed, what was well known before, that in the district from which most of his material was secured the women were liable to have miscarriages, and on investigation it was found they all came from the white-lead or pottery works where they were exposed to chronic lead poisoning. Bell, being a surgeon well trained in laboratory methods, proceeded to experiment, using pregnant rabbits. He found that if a pregnant rabbit was given a sufficient quantity of lead, it aborted just as the human female did, and that abortion was not caused, as had been thought, by contraction of the uterus due to hemorrhages produced in the substance of it, but by actual poisoning of the placental structures, which, under the microscope, were found to be necrotic. This experiment was tried over and over again, and finally he said: "If it will kill placental tissue, it will kill a placental tumor." He watched for a chorio-epithelioma, but did not find one. Finally, a woman appeared with an enormous carcinoma of the breast with axillary metastases. She was pregnant, and was delivered in the wards. Afterwards she was examined by various surgeons and pronounced inoperable, and after securing her permission to try an experiment, he administered a large quantity of lead. Suddenly the whole tumor disappeared. That was six years ago, and I saw the woman in Liverpool in January, and she was still well. He had sections made of the growth and sent to a number of pathologists, and everybody agreed that the neoplasm was carcinoma. Bell and his colleagues thought for a moment that the cancer problem was solved; but, unfortunately, the next series of patients so treated all died, so the cancer problem was not settled.

They then began a very interesting experiment which some men in Liverpool financed. They enlisted the chemical staff of the University of Liverpool, and tried to make a nontoxic preparation by combining the lead with various substances. They tried to get the lead into the body without the body noticing it, but found that when the body did not notice it, neither did the tumor. In other words, it was necessary to give a very considerable dose, a dangerous dose, of lead in some form in order to affect the tumor. Finally they were reduced to a preparation made by the simple process, well known to chemists, of taking a solution which contains gelatin in order to keep the lead in suspension and a little calcium chlorid, putting this in a flat dish, and with two lead poles connected with a lighting circuit producing a series of arcs.

These arcs carry lead vapor which precipitates in the fluid in the form of a black cloud. In the course of fifteen or twenty minutes the solution is ready for analysis and use. No one knows just what the composition of this lead is. It must, therefore, be analyzed. The dose is 100 mg. of metallic lead. It should not contain particles larger than 0.2 of a micron, which of course is fairly small. It probably contains a

* Read before the General Meeting of the Medical Society of the State of Pennsylvania, Philadelphia Session, October 14, 1926.

considerable amount of hydroxid and carbonate of lead.

The toxicity rapidly increases when the solution is kept, and it is wise to use it fresh. Beside Blair Bell's original mixture, many other preparations have been made. Colloidal lead bromid or iodid are on the market, but they are highly toxic, and cannot be recommended for use. A British firm has made a lead colloid which it is hoped will prove to be a commercial product. There is enough gelatin in the mixture to keep the lead in suspension.

Professor Blair Bell has been working some six years with his particular preparation of colloidal lead, and has treated some three hundred patients. In about eighty per cent the disease progresses, and such patients gain nothing by the administration of the lead. The 80 per cent that gain nothing is not, however, 80 per cent of all cancer patients that apply, but 80 per cent of all that he is willing to treat. Cases with renal lesions must be rejected. Those with cerebral lesions must also be eliminated. A hemorrhage in the tumor, of course, would kill the patient. Patients with extensive lung metastases should be excluded. Patients with large abdominal tumors must have these tumors removed.

When the lead is injected into the veins it is very rapidly distributed about the body to the liver, the lungs, the kidneys, etc., apparently differing in the various animals. The distribution in human beings cannot be judged by the distribution in the rabbit or cat. In the cat the lead is deposited chiefly in the lung; in the rabbit in the liver, but a certain proportion goes to the tumor. If the tumor is too large, enough lead to produce a toxic effect on the neoplastic cells will poison the liver and kidneys. Therefore, large masses must be removed to reduce the bulk of the tumor. The cases I have seen have justified this action. There have been some astounding results after such removal followed by treatment with lead.

All cases of squamous-cell epithelioma of the tongue, lip, or cheek must be eliminated. They do not seem to be sensitive to lead. Why is not known. It would seem as if the more vascular tumors were the more sensitive, and the rapidly growing sarcomata and the medullary carcinomata seem to respond better than the less vascular tumors.

It is folly to attempt to inject this terrifically toxic substance into a person in an advanced stage of cachexia, or into some frail woman. In other words, patients must be in fairly good condition. People vary enormously in their sensitiveness. Some patients, after the injection of 100 milligrams of lead, go home and back to work; others must be kept under morphin because no food will be retained by the stomach, and jaundice may occur which would make a canary bird jealous. So a good many of the cases sent to every person who has any treatment for cancer must be eliminated. Blair Bell properly eliminates all operable cases. He feels that surgery is a tested method with definite results; therefore he will not treat any one who is in any way within the reach of surgery. For the same reason, he will not use this method for postoperative treatment. There are dangers in the treatment to which we are not justified in submitting the patient. At best, only a relatively small proportion of the hopelessly inoperable cases can be treated with any hope of success.

The treatment, according to Blair Bell, is not yet wholly fixed. At first he was rather prone to give 100-milligram doses every week, usually having to transfuse the patients at the end of the second dose in order to relieve the anemia, although patients vary in this respect. It is not possible to predict what is going to happen, and one should always be prepared to give a transfusion. The anemia may be rather rapid and very grave. Of late, the practice has been to start out with 25 to 50 milligrams, and watch the patient to see what happens. Usually some fever, nausea, and headache follow. The next day the patient will not eat, but in a day or two he is fairly well. Then at the end of a week he is started on a 100-milligram dose. He will feel a good deal worse as a rule. Success depends upon judgment of what the patient will stand. This treatment does not mean that the physician buys so much colloidal lead and lets an intern stick in 100 milligrams every week. It means that each case must be tried out. If the patient is highly sensitive, Blair Bell tries to diminish the immediate effect by splitting the dose and giving 25 milligrams every three or four days; but I gained the impression, when I was last in Liverpool, that the results were not so good as when larger single doses were given less frequently.

The crux of the problem of cancer therapy is this: There is in the body a new group of cells which are derived from the healthy cells of the body. They do not differ much from normal cells except that they grow a little faster. If these cells are to be destroyed without poisoning the body fatally, a very large quantity of lead will have to be given, approaching the lethal point to the patient's kidneys and liver. The same situation exists with the x-ray. Any type of cancer can be cured with this ray, but the patient may not survive the treatment. There-

fore, x-ray therapy is limited by the position and nature of the growth. Some tumors cannot be touched with the x-ray because the patient cannot stand the dose. The same thing is true in treatment of certain types of carcinoma with lead.

Lead injection has many limitations, but there is one important point—that the x-ray and the lead do not conflict. I am convinced that when this method is a little further developed, we shall give both x-rays and lead at practically the same time. Patients who are nauseated by the lead might as well have a little more from the x-ray. They seem to stand it very well. Two destructive agents are then working on the cancer cells at the same time. There is one great advantage of the combination: The lead is a straight cell poison, and when the metal is eliminated the tumor begins to grow again. In other words, the cells of the tumor must be killed. With the x-ray the patient can be clinically cured for a long time, at least, without killing all the cells. I have seen a case of epithelioma of the lip cured by radium, but the scar still contained viable cancer cells which developed into a new epithelioma thirteen years later. The x-ray, then, can heal the lesion without killing all the cells, but so far as our present observations go, this cannot be done with lead. Therefore, I believe the combination of x-rays and lead will be very valuable because the former damages the blood vessels and causes a permanent diminution of the blood supply, and thus keeps the cancer cells starved so that they cannot grow.

An interesting illustration of the possibility of such action is a piece of experimental work done in my laboratory by Dr. J. Heiman. If a highly malignant carcinoma is grafted into the center of a slow-growing fibroma, it will remain encapsulated; but if the carcinoma is removed after several months of residence and grafted into another animal, it will grow rapidly and kill the host in a short time. In other words, a highly malignant tumor can be robbed of its proliferative powers by encapsulation and suitable reduction of food supply.

One difficulty in using lead is that there is no way of telling whether a tumor of a given morphology will be susceptible. If it is a squamous-cell growth, it probably will not be susceptible, but which tumors will yield and which will not cannot be determined by the microscope. The same thing, however, is true of the x-ray. This means that tumors have biologic qualities which are not expressed in their morphology. Any experienced worker with the x-ray knows that if three cases of cancer of the breast are rayed, one type will disappear, another will grow, and a third will be entirely uninfluenced. In other words, in the human being, we see three grades of malignant tumors.

The same thing is true of lead. In a few minutes after colloidal lead is injected into the body, it is swept into the various organs and cannot be found in the blood. It is probably taken up by the endothelial phagocytic structures of the body. It is deposited in the bone marrow, the spleen, and the liver, to a small extent in the lungs, and a variable amount is collected by the phagocytic elements in the brain or nervous system. There seems to be no damage to the lungs. There is no evidence of pulmonary thrombosis. The liver, in animals, shows extreme lesions. Blair Bell has not found such focal necroses in human beings, but it may be that the lesions have healed before the patient's death. In animals, the spleen is extensively damaged, and the characteristic structures may wholly disappear after a few injections of lead. The bone marrow is seriously injured, both in animals and human beings. The human kidney seems more sensitive than that of the rat, for very severe kidney lesions have been shown in some of the fatal cases. So, when this substance is injected into the human body, that body is very seriously poisoned and the beneficial or harmful result rests in the balance between the damage to the body and the damage to the tumor.

The lead ultimately is transformed into an insoluble form, carried to the bones, and deposited there as lead phosphate.

The patients occasionally have lead colic, many of them have intestinal distention which is very annoying and painful, and some have severe diarrhea. The kidneys may show no clinical evidence of irritation, no casts, or albumin, and the quantity of urine and the blood urea may remain normal; but a certain number have casts, albumin, and blood. In other words, the patient must be kept in a state of lead poisoning for a considerable period, and if the tumor disappears, the case is cured. But if the tumor is not damaged sufficiently, the patient dies of his original disease.

This is a very dangerous and painful type of treatment for most people, and especially those who are sensitive and nervous.

I should like to hazard a guess that of 100 unselected inoperable cancer cases one to two per cent will finally be cured by the lead. That is about what the x-ray will do, and is better than surgery, but we shall not be able to tell until the figures are in at the end of five years of observation. However, we cannot say to the individual patient: "Take this lead and it will

certainly improve or cure you." One cannot make any promises.

There is another difficulty in regard to the treatment, and that is the expense. The lead costs practically nothing, but transfusions do cost, and if the patient has to have five or six transfusions, as is often the case, it means a good deal of money. It also means, in most cases, hospitalization for two months, because the patient is often acutely ill.

Practically, we may sum up the situation as follows: A few advanced and inoperable cases of carcinoma and sarcoma have been cured by the injection of colloidal lead. At the present time it is not a method that can be applied by the general practitioner, but must be confined to well-equipped hospitals. The colloid must be accurately and quickly analyzed. It must be made fresh every day. It takes a good chemist to make it, and it takes an experienced physician to avoid killing the patient in the course of treatment. While we have a method in which the possibilities are enormous, yet at present great care must be used.

That thirty or forty people are walking around in Liverpool today who should have been dead three or four years ago does not mean that the cancer problem is solved. We must still send these patients, when operable, to our old standby, the surgeon; we must still use radium and the x-ray; and probably in time we shall combine both of these agencies with some form of lead.

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Symposium on Gynecology*

ENDOMETRIAL CYSTS OF THE OVARY†

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In 1921, Sampson presented his first paper dealing with what he called perforating hemorrhagic chocolate cysts of the ovary, basing his nomenclature upon the gross characteristics of the tumor. Since then, he has called them hematomata of endometrial origin to differentiate them from other types of hematomata, and the various manifestations which this lesion may present are embraced in the term endometriosis. While this lesion is of particular interest to the gynecologist, its frequency, often characteristic symptomatology, and treatment make its recognition essential to both the general surgeon and practitioner. This monumental work of Sampson's, so carefully and scientifically worked out, has met with almost universal acceptance, and stands out as one of the greatest contributions of recent years.

For many years, endometrium-like tissue has been described as occurring in the ovary, on the surface of the uterus, in the cul-de-sac of Douglas, and elsewhere in the pelvis. Its origin was ascribed to metaplasia of the peritoneal endothelium, aberrant embryonal rests, or atypical manifestations of the normal germinal epithelium of the ovary. According to Sampson's conception, these islands of cells are transplanted endometrial or tubal epithelium which has been carried out through the tubes at the time of menstruation, found lodgment on the ovary or adjacent structures, and there gone on to further development. More recent studies have demonstrated that there may be more than a mere mechanical transplantation, in that normal endometrial cells are found within adjacent lymphatics or blood vessels, a true metastatic process leading to deep penetration of uterine tissue or transportation to more distant sites, as, for example, the round ligaments and inguinal region.

Exceptions to this mode of origin of endometriomata have appeared from time to time, and one of the most recent as well as most convincing contributions has been presented by Novak (before the American Gynecological Society in May, 1926). He denies the tubal transportation theory of Sampson, and is of the opinion that the ovarian endometrial rests originate primarily in the ovary and result from an ectopic differentiation of cœlomic epithelium. While this and other theories may make the origin of these cysts still a matter of conjecture, the broader and infinitely more important aspects of the lesion dealing with its dissemination, life-history, and clinical manifestations as first portrayed by Sampson remain undisputed.

In order to describe the pathology, let us trace the life-history of these implants after they have appeared on or within the ovary. The primary site is on the free surface of the ovary, which seems to serve as the ideal host or incubator. They may remain a surface lesion, and are recognized as minute red or purple bodies, depending upon their age or the period of the menstrual cycle. There may be an invasion of the ovary, giving rise to cysts of varying sizes which contain the typical, chocolatelike content. These chocolate cysts may be present in one or both ovaries (in fact, they are more commonly bilateral), and in the same ovary various stages of development may be demonstrated. Sooner or later, the increased tension of contained blood

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causes a perforation of the cyst wall with dissemination of the contents to adjacent structures, and adhesions occur at the site of perforation. With the liberation of these cells, fresh implants arise and pass through identically the same process as above described.

Not infrequently, one finds transplants in the cul-de-sac, on the sigmoid, ileum, or appendix with no demonstrable lesion in the ovary, or at most, ovarian lesions so minute as to escape detection unless carefully searched for. Sampson has emphasized the fact that peritoneal transplants occurring independently of a primary ovarian lesion are never so extensive nor so active as those which arise secondary to the rupture of an ovarian lesion. In other words, the ovarian domicile seems to impart vigor to the cells, rendering them more active, with greater power of invasion. While the lesion is not malignant in the true histologic sense, its mode of invasion and penetration of neighboring structures closely simulates carcinoma, and even the bladder, rectum, sigmoid and rectovaginal septum may readily become involved. Such penetration excites a tissue reaction the gross appearance of which may make differentiation from carcinoma a difficult matter.

Because of the endometrial lining, these cysts and transplants react to the ovarian stimulus, and hence participate in menstruation, the menopause, and pregnancy. We have had no opportunity of studying the effect of pregnancy upon them, but Sampson reports one case in which he could demonstrate typical decidual reaction within the cyst wall as well as in the minute peritoneal transplants. With menstruation, blood collects within the cyst or transplants, and with the onset of the menopause, whether this be natural or surgical, atrophy occurs. Recognition of these atrophic changes incident to the cessation of ovarian function is often of vital importance in the treatment of these cysts.

When one has familiarized himself with the various manifestations of this lesion, it is remarkable with what frequency it is found. Sampson states that next to myoma, the pathologic conditions arising from such implants probably furnish the most frequent lesions found at operation in women between the ages of thirty and the menopause. The statistical data presented in this paper is based upon a study of sixty-seven gross ovarian lesions and four adenomata of the rectovaginal septum. This represents about five per cent of the lesions for which an abdominal operation was performed during the past three years. Not included in this number are the small symptomless transplants often encountered when operating for some other condition.

The clinical manifestations show wide variations. This is due to several factors, chief among which are the extent of involvement and the presence of complicating pathology. Small transplants upon the ovary, uterus, or sigmoid are often symptomless, but with the development of large cysts, which are invariably densely adherent, and the invasion of neighboring structures, a characteristic clinical picture is presented which permits of a definite diagnosis of the lesion. Associated pelvic pathology is commonly present, and may so dominate the picture as to obscure the ovarian lesions. In our series of 67 cases, myomata were present in 36, a chronic adnexitis in 11, and an adherent retro displacement in 8.

Age Incidence. The lesion is essentially one occurring during the years of active menstrual function. Of our patients, the youngest was 22, the eldest 53, and only one had passed the menopause. The percentage by decades is as follows: third 26.4, fourth 44.1, fifth 23.5, sixth 5.8.

The extensive pathology resulting from the lesion itself, as well as the associated abnormalities, render sterility a prominent symptom. Of 50 patients who were married, 42 per cent had never been pregnant; 58 per cent gave a history of one or more pregnancies, with an average interval since the last child of 10.5 years.

The analysis of our cases leads us to believe that ovarian hematomata *per se* produce no typical alteration in menstruation. In 41.8 per cent the periods were normal in duration and quantity, and in 6.9 per cent they were scanty or absent. Menorrhagia is noted in 28, or 41 per cent, and of these, myomata were present in 18. Hence it must be assumed that the menstrual abnormalities were of uterine rather than ovarian origin. In but 10 cases of abnormally profuse menstruation might an ovarian dysfunction be considered the causative factor.

Dysmenorrhea is commonly present, although we find that in 43.2 per cent of our cases, there was no history of menstrual pain. Dysmenorrhea dating from puberty was noted in 18 per cent, with no increase in intensity nor alteration in type of the discomfort, and 38.8 per cent had an acquired dysmenorrhea. There was no uniformity in the time of appearance, location, or duration of the pain. Exception to this, however, was presented with massive invasion of the bladder, rectum, or rectovaginal septum, under which circumstances pain and disturbed function were experienced only at the time of menstruation or became greatly exaggerated at that time. In 53 per cent there was an intermenstrual dis-

comfort in the lower abdomen or pelvis, and lumbosacral backache was a frequent complaint.

Based upon this analysis, the symptoms suggesting an endometrial cyst are: (1) age, between 25 and the menopause; (2) sterility, absolute or relative; (3) abnormal menstruation; (4) dysmenorrhea of the acquired type; and (5) symptoms referable to invaded organs, which bear a direct relationship to menstruation. Such a symptom complex and the demonstration of a unilateral or bilateral, semisolid, adherent pelvic mass or nodulations in the cul-de-sac make the diagnosis almost a certainty. Confusion with carcinoma of the vagina or rectum is easy when the lesion is of considerable size and extends well down into the rectovaginal septum. The absence of ulceration and bleeding, the typical blue tinge of the nodules in the vaginal vault and the invariably direct relationship between symptoms and menstruation make the differentiation easy.

Treatment. Being essentially a disease of comparatively young women in whom ovarian conservation is desirable, its treatment may present a perplexing problem, and only too often resort must be had to radical surgery. However, the results obtained in our series of cases where conservative methods were employed warrant their adoption whenever possible. In thirty patients, one or both ovaries were conserved. Only two have had subsequent pelvic disorders. One developed a retention cyst of the conserved ovary one year later, and in the other a transplant was discovered in the vaginal vault six months after operation. Of seventeen patients in whom the menstrual function was preserved, only one has had any irregularity, and this amounted to nothing more than occasional intermenstrual spotting. Following upon conservative methods in ten married women, one has had a child.

Into the group which are amenable to conservative measures fall the smaller ovarian hematomata which can be readily excised and the minute ovarian transplants which are easily destroyed by cauterization. As a general rule, the peritoneal transplants are small, increase in size very slowly, and produce no symptoms; hence no treatment is necessary.

Unfortunately, more radical procedures are required in the majority of cases. The larger ovarian hematomata are invariably densely adherent, and their liberation is attended by such injury as to make excision of the affected organ imperative. Likewise, with invasion of other structures leading to decided impairment of function, nothing short of a bilateral ovarian excision will suffice. In the absence of obstruction, intestinal resection is rarely necessary, for ablation of ovarian function will be followed by atrophy of the endometrial tissue within the intestinal wall. This also applies to similar invasion of such structures as the bladder or rectovaginal septum where excision would be a hazardous or impossible procedure.

Four of our patients presented deep infiltration of the sigmoid or rectum. In one, a resection of the sigmoid was done, while in the other three, complete recovery from the intestinal symptoms followed upon a bilateral oöphorectomy. In two cases, invasion of the bladder wall was demonstrable cystoscopically. Disappearance of the vesical lesion took place in both after bilateral oöphorectomy, and one patient has been completely relieved of her symptoms. The second patient subsequently developed a carcinoma of the bladder, and microscopic examination of the growth showed its origin to be from the vesical mucosa.

In four patients, typical adenomatous invasion of the rectovaginal septum was demonstrable. Three of these were in young women, and the symptoms were not of sufficient intensity to require treatment. One suffered acutely with rectal pain and backache at the time of menstruation. The menopause was induced by irradiation, with complete subsidence of symptoms and gradual atrophy of the vaginal lesion. In those cases in which invasion of endometrial transplants is evident, no gross ovarian lesion is demonstrable, and the symptoms are of such severity as to demand relief, the production of an artificial menopause by irradiation is the procedure of choice.

In conclusion, we recommend careful inspection of the ovaries in all pelvic operations, with cautery excision of transplants as a wise prophylactic measure.

WHEN SHALL WE TREAT RETROFLEXIO-VERSION OF THE UTERUS AND HOW?

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So much has been said about the methods of operative correction of retroflexio-version of the uterus that the entire subject of the treatment of this form of malposition of the uterus appears like a well pumped dry. But there is one aspect of the situation that may not be entirely settled in the mind of the profession, if one is to judge by the papers which have been written more or less recently. That question concerns the propriety and desirability of treating retroflexio-version at all. The question propounded in the title, therefore, deserves our attention for a few moments.

A number of authors have expressed themselves as doubtful that a movable retroflexio-version ever produces symptoms, and have classed most of the efforts to correct such a condition by operative or nonoperative means as useless or even meddlesome.

There is some truth in the position of these gentlemen, but it must be rightly interpreted. They have drawn attention to the fact that a simple retroflexio-version without descensus, without adnexal disease, and without enlargement, is often congenital in origin and may give rise to no symptoms whatever. Such a condition is usually found in the unmarried woman, whose only pelvic function is menstruation. The flow may be normal, or, if there are menstrual disturbances, they are often no more distressing than those of a woman whose organs, so far as we can tell, are anatomically perfect. When in the course of a complete physical examination, in the search for an explanation of certain symptoms, an uncomplicated retroflexio-version of the uterus is found, of course it is obvious that it should be let alone, unless without question it clearly accounts for the disability. This will not always be the case, and undoubtedly a large number give rise to no symptoms and require no treatment.

But this truth, dwelt upon at large and magnified, leads to the idea that retroflexio-version may be very generally disregarded in explaining symptoms, and that operative or other correction of the abnormality is seldom worth while. This misapprehension may show itself when the surgeon repairs the pelvic floor for relaxation and then neglects to open the abdomen and lift the uterus by shortening the round ligaments as a supplementary measure; it may show itself by the indifference with which retroflexio-version after labor is sometimes regarded and left untreated; it may show itself in a disinclination to attribute certain symptoms to retroversion and to deny a certain morbidity to the condition if it is allowed to persist. Unquestionably this skepticism may have come about as the result of several factors:

(1) The failure to recognize that the symptoms of retroflexio-version may be combined with those of other and associated lesions, so that the correction of the first will not clear up the second. I am referring particularly to the symptom of backache. It has not been uncommon in the past for the doctor as well as the layman to become disgusted with the result of an abdominal operation for the purpose of correcting the position of the uterus. The promised relief was not obtained because the backache was not entirely due to displacement. This fact does not prove that a turning of the uterus backward is really without symptoms, or that in the individual instance it played no part in the symptomatology; it simply shows that the secondary and complicating pathology in the case was not appreciated.

(2) The methods of correcting retroflexio-version have not always been well planned and well executed—either the operative correction or the treatment with a pessary. The large number of operative methods which have been devised and used for retroflexio-version show how unsatisfactory most of them were, and one has but to observe the use of the pessary in many hands to prognosticate its utter failure to relieve and the certainty with which it will cause other suffering; instead of helping, proving to be a positive detriment.

What then is a judicious attitude in regard to retroflexio-version?

(1) It should be let alone in the case of the unmarried woman when there are no complications and no symptoms.

(2) It should not be let alone in the married woman who is desirous of children. There is no single thing which is more often responsible for abortion in young married women of the better class than retroflexio-version, and a neglect of it in them has often led to misfortune.

(3) The symptoms of retroflexio-version should be carefully studied so that one may be able to differentiate in the individual between symptoms due to retroflexio-version and those due to other lesions.

What symptoms does retroflexio-version produce? I should name them, in the order of frequency, as backache, lower abdominal distress, menorrhagia, dysmenorrhea, and vesical and rectal disturbances. The first two are by far the most frequent. The mistake has often been made of attributing backache entirely to a displacement when there were other associated causes. Very often backache is produced partly by a displacement and partly by an associated sacro-iliac sprain or an habitual faulty posture (static backache). In the married, and especially the child-bearing woman, this double factor in the production of backache may be demonstrated by the fitting of a pessary which will partly relieve her (the pelvic factor will then be negatived) and by the provision of suitable and corrective support of the pelvic joints. A combination of the two gives entire relief while either alone would be a failure. So far as the complaint of the patient is concerned, backache or lower abdominal distress due to retroflexio-version is worse on exertion and is relieved by rest. Static or sacro-iliac backache is often at

its worst when the patient lies in bed; it may waken her during the night, and often troubles her before she arises in the morning. There are, of course, other differential points which the limited time at my disposal does not permit me to discuss.

The pessary is a much unappreciated and much maligned device because it is so often badly understood and badly managed. The mechanics of the pessary are not clear to many. In the writings of one of the more prominent specialists of the day, it is declared that the pessary holds the uterus in place by pressure on the posterior wall of the cervix. The average man can not intelligently select and fit a pessary with such a conception of its mechanics. The pessary does not act by pressure on the uterus, for when it is correctly placed it barely touches the uterus. There is no need of pressure on the uterus, because the pessary is not introduced until the uterus has been replaced. The pessary simply holds it there, where it belongs, not by pressing on the uterus in any direction whatsoever, but by putting the posterior vaginal fornix on the stretch, for that pulls the cervix upwards and backwards. Whatever holds the cervix up and back throws the fundus forward because there is a uterine axis of mobility forward and backward, on a transverse line at the position of the internal os. With a maintenance of this action, which takes the place of the normal function of the uterosacral ligaments, intra-abdominal pressure on the posterior surface of the uterus keeps it forward.

A correct understanding of the principles involved in the use of the pessary will enable one to treat most cases of retroflexio-version in the married child-bearing woman with entire satisfaction. Operation in cases without adnexal or other intra-abdominal lesions need not be undertaken until after the reproductive period has passed. It is illogical to operate during the child-bearing period because subsequent labor may reproduce the condition, although it is much less likely to do so if the operation for suspension of the uterus is correctly conceived and executed.

The ideal operation is the one that suspends the uterus by the uterine muscular end of the round ligament, for this is the part that hypertrophies early in pregnancy and undergoes involution after labor. The attachment to the fascia is extraperitoneal, no needling of the uterus is done, and there is no interference with the blood supply of the adnexa.

The shortening of the round ligaments is wisely supplemented, when there is descensus in addition to the retroflexio-version, by a shortening of the uterosacral ligaments. The fundus is then drawn forward, while the cervix is held upward and backward.

THE RUBIN TEST IN THE DIAGNOSIS AND TREATMENT OF STERILITY IN WOMEN*

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Prior to 1920, when Dr. I. C. Rubin[1] announced his method of determining the patency of the fallopian tubes by the injection of oxygen under measured pressure into the uterus and through the tubes into the peritoneal cavity, the treatment of sterility in women was a haphazard and discouraging process.

Innumerable cervices were dilated, and uterine cavities curetted unnecessarily and without result; uncounted infections followed the use of the glass stem-pessary; and many reposition operations were performed, regardless of a lack of symptoms, solely on the assumption that pregnancy might follow. It was impossible from palpation alone to judge the condition of the tubes, and if they were not grossly swollen and diseased it was taken for granted that they were normal.

Rubin himself points out that at least 11 per cent of female sterility is due to tubal disease, and this figure is probably far too low. His ingenious test has made it possible to carry out nonoperative determinations of the patency of the tubes, and as a diagnostic measure has rounded out the study of a sterility case so that it is now comprehensive and scientific in its detailed steps.

At the present time a patient who is unable to become pregnant should be carried through a fairly systematic investigation, which may be generalized as follows: (1) A routine pelvic examination to eliminate gross pathology. (2) Examination of the spermatic fluid from the husband, preferably by removing specimens from the vaginal vault and the cervical canal reasonably soon after coitus. This gives information not only as to the presence or absence of spermatozoa, but also regarding their activity under such conditions as may prevail in the vaginal vault.

When all likely causes for sterility, excepting only that of tubal pathology, are ruled out, the Rubin test is indicated. It is obvious, of course, that it should not be done if there is any evidence of bartholinitis, vaginitis, cervicitis, or

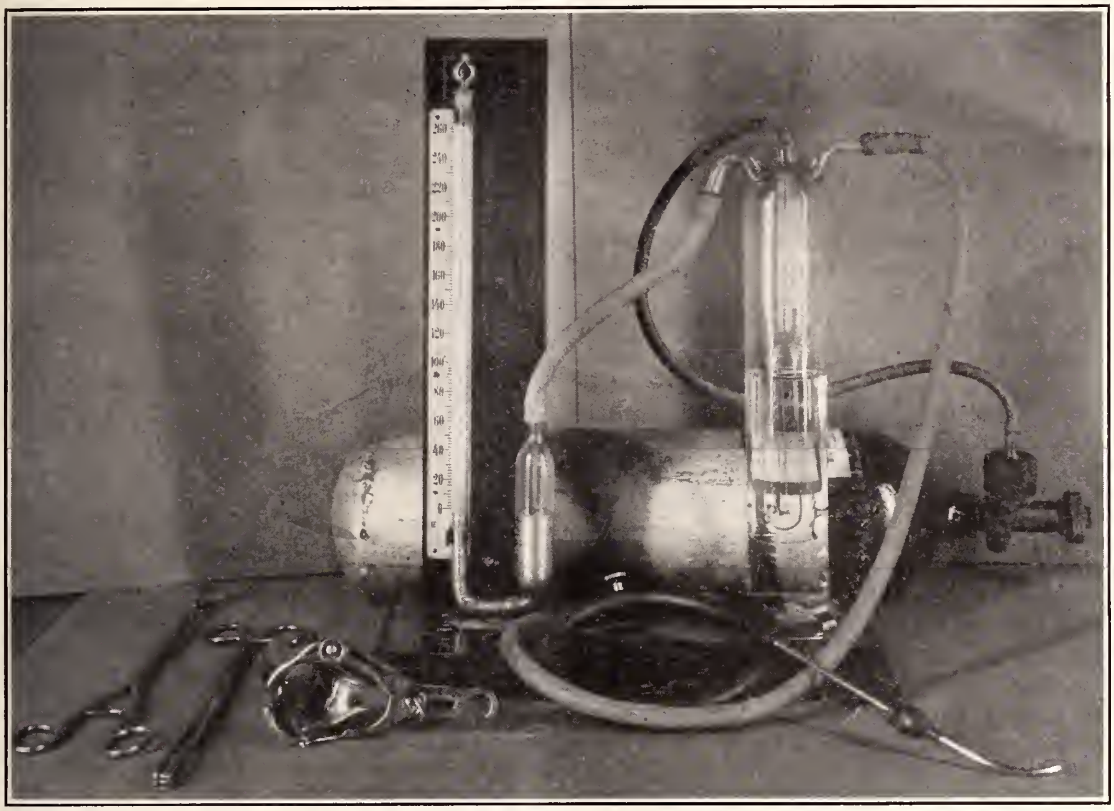
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subacute or acute pelvic peritonitis; but even with a history of gonorrheal or appendiceal pelvic infection which has long subsided, the test may be utilized with comparative safety. This is the border-line field of its usefulness, however, and with such a history the test should be undertaken and carried out with great caution.

In a few reported instances subacute pelvic infections have been lighted up, or exceptionally mild shock followed the test, although this is usually attributable to an overvolume of gas injected into the peritoneal cavity. Two deaths recently reported were classified by Rubin[2] quite correctly as "inexcusable," an excessive amount of gas having been injected under tremendous pressure in both instances, to say nothing of the fact that both women presented pathologic conditions which made the advisability of the Rubin test doubtful, even with proper technic. In a reasonably large series of cases, I have had no ill effects other than the transitory pain from the injected gas, which is always to be expected.

In mentioning contraindications to the test, it should also be remembered that it ought not to be done except within a few days after the cessation of a menstrual period, in order to avoid the possibility of disturbing an unsuspected early pregnancy.

While it has been spoken of in this discussion as a test, it often proves to be of definite therapeutic value. For example, I have had several cases, and many have been reported by others, in which this insufflation of the tubes was done solely as a diagnostic measure, only to have the patient become pregnant almost immediately. These are the cases in which the sterility was probably due to a catarrhal or possibly a spastic condition of the tubes, with mucus plugging some portion of the lumen, such as the fimbriated end.



Apparatus (Rubin) for insufflation of fallopian tubes, showing carbon-dioxid tank, meter for gas, mercury manometer, gas vent-valve, uterine cannula with rubber stopper for cervix, and instruments necessary for test.

Apparatus and Technic

Rubin's original apparatus for transuterine and tubal insufflation has been variously modified, but improved only slightly if at all. It consists of a tank of carbon-dioxid or oxygen gas attached to a glass meter which measures by water displacement the volume of gas passing through into a tube. This latter ends in a uterine cannula with perforated end which carries a rubber stopper to plug off the cervix, and has attached to it a valve for releasing the gas-flow. By back pressure through the meter, the force which the gas exerts against the tubes in its attempt to pass is measured on an ordinary mercury manometer.

The external genitalia should be well cleansed

with green soap and water, followed by lysol or bichlorid solution. The cervix is exposed by a bivalve speculum, painted with tincture of iodin, seized and drawn down by a tenaculum forceps, and the canal cleansed with tincture of iodin.

The speed of the gas flow should be regulated at about 200 c.c. per minute, the air valves opened, the cannula inserted, the cervical canal plugged off by the rubber-stopper, the air vent closed, and the test begins.

As the mercury mounts the readings are important. In those instances where the tubes are open and normal the mercury will rise only to about 70 or 80 mm. and often drops 10 or 20 mm. as the flow of gas proceeds through them. With patent tubes, not more than 120 to 160 c.c. of gas should be allowed to pass into the peritoneal cavity.

If the back pressure rises to 180 or 200 mm. the tubes may be said to be closed, although I had one case in which the mercury column measured 190 mm., in consequence of which I diagnosed occluded tubes. When the patient sat up, however, she complained of the characteristic pain under the liver and its accompanying pain in the shoulder, this being evidence that gas had passed through the tubes. While one positive test is all that is necessary, two or three entirely negative tests are required, therefore, in order to make a definite diagnosis of occluded tubes.

From a diagnostic standpoint, the very high and the very low levels are fairly conclusive. Of therapeutic interest as well, however, are those instances mentioned before in which the pressure may go to 140, 150, or even 160 mm. of mercury and be sustained there for a moment, only to be followed by a sudden drop to 100 mm. or thereabouts, a steady flow of gas going through at this level. These are the cases in which plugs of inspissated mucus are undoubtedly blown out of the tubes, and pregnancy so often follows the test.

Fluoroscopic examination is important in cases where the passage of gas through the tubes is in doubt. A bright or light band seen under the diaphragm on either the right or else on both sides, as the patient breathes, is evidence of a pneumoperitoneum.

The discomfort and pain caused by the gas beneath the diaphragm in the peritoneal cavity usually lasts only a short time, because the gas is absorbed fairly rapidly. Reasonably small amounts of injected gas cause only slight discomfort, and large amounts are unnecessary. If the pain is great, however, the patient may be put in the Trendelenberg position in order to relieve the pressure on the diaphragm until the gas is absorbed.

In briefly summarizing the foregoing, it may be said that Rubin's method of oviduct, or tubal insufflation, has established a simple but effective nonoperative method of diagnosing tubal pathology as a cause of sterility. The method is safe in properly selected cases when proper technic is observed. In many instances sterility may even be relieved by the inflation and clearing out of fallopian tubes that were otherwise normal, and pregnancy often follows the test when the tubes were, presumably, merely spastic, or plugged with mucus.

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ABSTRACT OF DISCUSSION

ON SYMPOSIUM ON GYNECOLOGY

SIDNEY A. CHALFANT, M.D. (Pittsburgh, Pa.): Sampson's idea of the development of chocolate cysts from endotubal epithelium is rather questionable, and we are rather inclined to the idea of transformation of cells already present. If he is correct, then certainly many more such cysts must develop following the transuterine test of Rubin.

These chocolate cysts have several distinguishing characteristics. One is the definite influence of menstruation. They begin after menstruation has been established, are common during the menstrual life, and are rarely found after the menopause. The pain and local tenderness are very characteristic, and they are commonly associated with hemorrhoids. They are practically all cured by radical operation, but one hesitates to do such an operation in young women, yet is more fearful of these cases after a conservative operation which permits a continuance of the ovarian influence, than in the average case. These patients are more apt to have some postoperative morbidity, and an occasional case will require reoperation. While most of these women are sterile, an occasional one will conceive after a conservative operation. I have two such cases.

Those cases that take the form of adenomyoma of the rectovaginal septum are frequently mistaken for carcinoma of the rectum, but there are definite signs which should make it easy to differentiate. In the adenomyoma there is no ulceration of the rectum until very late, and while it may encroach on the anterior wall, it does not encircle the rectum as does a carcinoma. Radium may be used to advantage in some of these cases of adenomyoma of the rectovaginal septum, as we know that they regress after the menopause, and the alternative of radical operation carries with it a rather high mortality and may necessitate a colotomy.

For a long time all cases of backward displacement of the uterus were considered as requiring correction. Then the opposite idea prevailed. Undoubtedly, however, there are many cases, particularly those associated with a downward displacement of the uterus, that require operation for cure. In the developmental type (that is, those associated with a short anterior vaginal wall and a low fixation of the cervix) in the nullipara rarely give symptoms, and require no treatment. The question of the relation between backache and displacement of the uterus has been much discussed. There are

many causes of backache other than backward displacement of the uterus that require elimination before advising operation. The pessary, if properly used, is a very valuable aid in establishing the diagnosis, and may be used to carry a patient through her reproductive years, so that she can be operated on later in life after the child-bearing period. The influence of a recurrent cervicitis and backache is being better understood. It is undoubtedly a factor, particularly in those cases where there is inflammation of the sacro-uterine ligaments secondary to the cervical infection.

The transuterine gas test of Rubin is certainly a great addition to our armamentarium. Rubin's first paper was received with much hostility, but further investigation has shown that with good technic there is practically no risk of infection. While the test may be followed occasionally by very prompt conception, yet, in my experience, that has not been the rule.

Richard C. Norris, M.D. (Philadelphia, Pa.): Endometrial implants are a distinct advance in our knowledge of gynecology, and increase the usefulness of radium. We all appreciate the value of Dr. Sampson's work, and physicians alive to the best interests of their patients bear this new pelvic disorder in mind.

The question of uterine displacement is perhaps the most practical one presented here. The attitude of mind toward etiology, symptomatology, and treatment of displacement is very often determined by whether one is a gynecologist or obstetrician or a combination of the two. Retroversion of the uterus should be of greater importance to the obstetrician than to the gynecologist. Much that should be done in a practical way should be done by the obstetrician; i. e., the early puerperal period offers the golden opportunity for treatment that will make surgical treatment unnecessary in three fourths of the cases. Uterine displacements are congenital and acquired. The congenital ones can be dismissed very quickly. They occur in ill-developed women—the hypoplastic group whose nervous systems and sex organs are anatomically and physiologically underdeveloped. Their cervices are small, conical, stenosed, and are abnormally placed in the vagina, the anterior wall being too short and the upper third narrow and contracted. The ovaries are anatomically and physiologically deficient. They do not often conceive. The gynecologist who shortens the round ligaments and treats these young patients surgically usually does them no good, but often does them a great deal of harm.

Most women require attention when they begin sexual life. Retroversion, with symptoms, may follow abortion, labor, or gonorrheal infection antedating pregnancy. The large and important class of retroversions that first occur or present symptoms after labor should be recognized by the obstetrician, and as prophylactic treatment is dominant in the world today, who has a better chance to prevent the woman being crippled from retroversion that will then acquire symptoms than the obstetrician?

The integrity of the bases of the broad ligaments, the uterovesical and uterosacral ligaments, and the fascial planes, which make up the upper pelvic diaphragm, is the big factor in preserving the normal position of the uterus. Destruction of this important diaphragm, whether it follows too early use of forceps or pituitrin, or routine version before gradual and complete dilatation, is the most frequent cause of retroversion. Even after normal labor, nature sometimes fails to protect these tissues. The ligamentous supports are overstretched, the cervix lacerated and dropped to a lower level in the pelvis, with the uterus retroverted. The golden opportunity to help nature, by local treatments, in her efforts at involution is in the early puerperal period. No obstetrician does his duty who does not examine his patient at least at the end of a month. At this time pessaries, cauterization to correct endocervicitis, posture, tampons, and douches, properly used, are in order, and are prophylactic and curative if the conduct of labor has been skillful and unavoidable injuries corrected immediately by careful surgical repair. Endocervicitis begins now or is aggravated. Early applications of antiseptics, use of the cautery, or diathermy are indicated. During this period, as well as during labor, the obstetrician must be a gynecologist if he is to do the best for his patient.

We split and repair a perineum by episiotomy with lasting benefit to the patient, but there is no such useful operation for the upper pelvic diaphragm, short of cesarean section, and if unskilled obstetrics permits extensive damage here, no gynecologist, however great his skill, can successfully repair this area as he can the lower, or outlet, pelvic diaphragm. The operations for procidentia, such as the interposition operation, accomplish a great deal to relieve symptoms by creating abnormal anatomy, but it is better to prevent the necessity for such operations. I would stress the value of local treatment in the early puerperal period. That is the time it will do most good. Unfortunately, in multiparas, we sometimes find an atrophied cervix following extensive injury, and a pessary will not stay in place. A multipara whose posterior vaginal wall has not been properly taken care of at labor has no foundation for and cannot use a pessary. A retroverted uterus beginning after confinement or abortion is a congested organ, and if not corrected early, this congestion always precedes tissue change and predisposes to slow extension of whatever kind of infection may have been acquired. If this prolonged congestion is prevented, these changes are avoided.

The choice of operation for retroversion in multiparas with relaxed upper and lower pelvic diaphragms begins with repair of the cervix, of the anterior vaginal and the posterior vaginal walls, followed by section and shortening of the round ligaments. Personally, I prefer for the latter the Mayo method. The uterosacral ligaments are often destroyed. Sometimes they are not, and it is then worth while to plicate them. The importance of the retroverted uterus must not be underestimated. Shall we defer this surgical treatment until the woman has ceased her child-bearing? I think not. Skilled obstetric management, including an episiotomy on the repaired perineum, will be in order, as she is potentially a primagravida and will require similar management.

The Rubin test is not without danger. It is not to be used in sterility cases with the hope that one insufflation will be followed by pregnancy. That result should be considered more as a lucky strike than an expected therapeutic result. The numerous causes of sterility, the fact that in at least one third of the cases the husband may be at fault should be remembered. Study of individual case should begin with him. One should also remember that the cervix may be the important factor more frequently than the tubes. My work in sterility begins with the husband and ends with the Rubin test, and then only in the few cases when the history indicates the possibility of occluded tubes, and an exploratory operation seems justified and the patient thoroughly understands the uncertainty of the result obtained. It is quite possible that the important practical rôle of Rubin's test will be at the operating table with the abdomen open.

Dionin in Ophthalmology*

THE INTENSIVE USE OF DIONIN IN OPHTHALMOLOGY

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After more than twenty years of experience with dionin in an industrial community, I have come to regard it as a most valuable ocular remedy, second in importance only to atropin and eserin in ophthalmic therapeutics.

My first practical experience with it was in 1903 in Vienna, where Fuchs was using it chiefly in trachomatous pannus, the results being so striking and beneficial that hundreds of peasants came regularly to have the powder dusted into their eyes. Although the reaction was severe and they complained bitterly at the time, it left their eyes feeling and seeing so much better that, with Spartan-like persistence, they returned again and again to have it used.

I was familiar with Wolffberg's (1899) and Darier's (1900) investigations, but had no opportunity of using it until my return from Europe, bringing a bottle of the powdered drug with me.

In 1904, Reber's paper on the use of dionin in ophthalmology was the first to appear in America. Since then many writers have written on its use in various ocular disorders. W. H. Snyder, at the 1905 meeting of the American Medical Association, illustrated its physiologic effect on rabbit eyes, projecting upon a screen a number of slides which showed the usual signs of general edema, vacuolation of the cells, and dilation of the lymph spaces. He concluded that the action of the drug is purely local, and greatest where the drug has actually rested; that its most marked action is in eyeballs whose tension is increased; that it has some dissociating action on the intracellular cement substance, allowing a transudation of serum from a globe under pressure; and that its analgesic action is explained by its lessening of tension and the well-known action of the derivatives of opium.

Dionin is a valuable remedy in all acutely inflamed globes, equally potent in cases of hyper- or hypotension. As a resolvent of exudates, adhesions, opacities, or scars in eyes quiet after a siege of inflammation it is equally efficacious. *It must, however, be used energetically and persistently or disappointment is sure.*

Dionin is soluble in eight parts of water, twenty parts of syrup, and twenty-two parts of alcohol. Hence 12½ per cent is the strongest aqueous solution that can be made.

In all cases of acutely inflamed globes it is my custom to prescribe a 5-per-cent solution in addition to meeting the special indications in each individual case. Two or three drops of this solution are instilled into the eye, and ten minutes later, after the smarting has subsided and the characteristic conjunctival edema is at its height, hot compresses are applied continuously for ten minutes. This is repeated two, three, or four times in twenty-four hours, depending on the severity of the case. If after three days of this procedure, results are not forthcoming, a small amount of dionin powder is applied directly to the globe, and the strength of the solution is increased to 10 per cent. Powdered dionin is applied at the daily visit.

In hazy and nebulous corneas and in corneal opacities and scars, striking results are often obtained by persistence in the intensive use of dionin. The conscientious ophthalmologist will endeavor to clear corneas no matter how hopeless they may appear at first. Scars and opacities of chemical burns, scars of ulcers, and dendritic corneas often resolve and disappear.

Dr. Linn in his paper will cite various observations of cures brought about by the intensive use of dionin, and I will quote but a few taken from our case records, reporting only the degree of vision before instituting treatment, the length of time required, and the final or present results.

1. Steelworker. Dense scar present for ten or fifteen years. Vision, light perception. After one year's treatment, vision 6/20. Still under treatment.

2. School teacher. Central, yellowish-white, dendritic opacity, unsightly and conspicuous. Vision, hand movements at one meter. Treated four years. The remaining slight haze can be seen with reflected light only. On account of some choroidal degeneration, vision is improved only to 6/60.

3. Steelworker. Large dense scar due to burn with hot metal. Vision, light perception. After two and a half years, vision 6/10+.

4. Coal miner. Diffuse haze. Vision 6/60? After three months' treatment, vision 6/10. Still under treatment.

5. Steelworker. Central ulcer followed by large superficial leukoma. Claimed loss of industrial vision. Received permission from Compensation Court to treat case. Recent vision 6/10 illiterate, after two years.

6. Coal miner. Central scar following ulcer. Vision 6/60. Treated one year. Vision 6/10.

7. Steelworker. Large dense scar. Vision, light perception. Treated one year. Vision 6/20. Still under treatment.

8. Housewife. Old central scar. Vision, light perception. After six months, vision 6/20. Still under treatment.

The use of dionin in clearing corneal opacities differs but slightly from treating inflammatory conditions. Invariably the home treatment begins with a 5-per-cent solution, three times daily,

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followed each time by hot compresses. The aqueous solution gives better results than an ointment. The patient is seen at least once weekly, when the powder is applied directly to the globe, a chalazion curet carrying about one-half grain being used. After a month's treatment a saturated solution is prescribed, and continued without interruption. The conjunctiva may at times show irritation, and an astringent solution such as zinc sulphate and camphor water is used concurrently, and alum is applied to the everted lids when necessary. The eye soon establishes a tolerance for the drug, and the phenomena of edema and congestion are not evident after a while, but the gradual and steadily increasing clearing of the cornea gives satisfying evidence of the continuous efficacy of the treatment.

SOME OBSERVATIONS ON THE USE OF DIONIN

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We are reporting eleven cases of interstitial keratitis, three of marked corneal scarring, nine of trachoma, and one of lime burn of the cornea treated by the intensive use of dionin, and occurring either in our private practice or in the University of Pittsburgh Dispensary. We treated these patients by first giving three instillations of 1-per-cent holocain solution, then as much dionin powder as will lie on the end of a spud, dropped into the lower conjunctival cul-de-sac. The younger children usually proceed to rub their eyes, thus helping the physiologic effect of the powder. In all cases, any general or local treatment considered desirable in the condition present was used.

The cases of corneal scarring presented old central scars from previous trouble. Vision was quite blurred, but there has been considerable improvement, more than we have been able to obtain with any other treatment.

In the case of lime burn there is, in our opinion, remarkably good vision for the type of burn. Improvement has been gradual but steady.

In the trachoma cases, although the improvement was not startling, nevertheless there was improvement in all but two, and there was more clearing of the pannus than we have been able to obtain with anything but tarsectomy. These were all chronic cases of the type seen in every dispensary, which wander from one to the other, and as soon as some improvement is manifest, will stop until another acute exacerbation occurs. All these patients have remained under treatment quite faithfully, which is an argument in favor of this treatment, as these people become keen in judging results or lack of them, and although all treatment of this condition is painful, the addition of the smarting of dionin to the other treatment would not be borne unless some virtue were realized.

We believe that interstitial keratitis presents one of the most favorable fields for the intensive use of dionin, and would earnestly solicit the use of it in this condition by other observers. Of the eleven cases described below, only four showed vascularization, and in these it was present before treatment started. We treated sixteen eyes in these eleven cases, with visual results in three of 6/5, in three of 6/6, in two of 6/7.5, in one of 6/12, in one of 6/15, and in two of 6/24, with four illiterates. By this form of treatment, the course of the disease seems to us to be definitely shortened. Patients are not considered cured until all ciliary injection has cleared up. We feel that the early persistent use of dionin in this way lessens the number of cases of vascularization of the cornea and therefore improves prognosis as to final efficiency of the eye, for we believe that much of the corneal haziness of old interstitial keratitis is due to the persistence of partly patent vessels which look empty by ordinary methods of inspection but viewed with the slit lamp are seen to have circulating blood. We account for this on the theory that dionin, by increasing the lymphatic supply of the cornea, removes the necessity of nature's supplying blood to it by throwing out adventitious vessels.

Among other types of conditions treated were six cases of phlyctenular keratitis, in which we could note no improvement, and therefore are not including them among the cases reported here.

Trachoma Cases

(1) A white male, aged 38, with trachoma of both eyes for a period of over seventeen years, was first seen by us on August 2, 1926, when he had marked thickening of the lids of both eyes, and scarring and atrophy of the bulbar conjunctiva of both eyes. There were scars on both corneas, with pannus and a bad deep central ulcer of the left eye. He was put on massage, with boric-acid powder and dionin powder insufflations. Vision of O.D. 6/60, O.S. hand movements at one foot, had improved by October 1st to O.D. 6/24, O.S. 2/60. This patient has been out of the hospital only one month—too short a time to show much progress.

(2) J. O., white male, aged 16, was first seen May 1, 1925, at which time the left eye had been sore and discharging for six months. There was ptosis of the lid and trachomatous follicles in both eyes. He was treated first by the roller operation, then by boroglycerin rubs and 1-per-cent silver nitrate. The rubs were given more or less continuously from then until July 14, 1926, at which time the vision was O.D. 6/6, O. S. 3/60. The right eye looked normal at this time except for some conjunctival scars, but the left eye had a thickened tarsus, considerable conjunctival in-

volvement, and rather marked pannus. Under boric-acid rubs and dionin, the pannus was gradually absorbed, until at present the vessels are nearly all atrophied, the lids nearly smooth and healthy looking, and the vision O.D. 6/6, O.S. 6/15.

(3) F. C., white female, aged 15, was first seen on May 13, 1926. She had trachomatous involvement of both eyes with marked pannus and central ulcer of the left eye. The vision was O.D. 6/15, O.S. hand movements. The lids were rolled, and the patient put on boroglycerin rubs every other day which were later changed to 1-per-cent silver nitrate. On June 23d we started boric-acid-powder rubs and dionin powder every other day. Vision on October 1st was O.D. 6/7.5 (?), O. S. 6/30. The pannus is nearly all cleared up.

(4) J. S., white male, aged 15, was first seen on May 25, 1925. The left eye only was involved, with marked trachomatous conjunctiva, ptosis, and rather marked pannus. He was put on boroglycerin rubs, and later 1-per-cent silver nitrate, with meager improvement. The vision was O.D. 6/24, O.S. 6/24. Boric-acid rubs and dionin were commenced June 26, 1926, and on October 1st, the vision was O.D. 6/15 and O.S. 6/15.

(5) C. B., white male, aged 42, was first seen February 9, 1926, at which time both eyes had been involved for ten months, with superficial corneal opacities, marked thickening of the lids, and slight pannus. He was treated with 1-per-cent silver nitrate, boroglycerin rubs, and copper-citrate solution. On July 15th vision was O.D. 6/60, O.S. 6/60. Treatment with boric acid and dionin powder was started at this time, and on October 1st vision was O.D. 6/24, O.S. 6/24.

(6) G. C., white female, aged 18, was seen September 6, 1923, at which time she had trachomatous involvement of the conjunctiva of both eyes, but no corneal involvement. She was treated for two months with boroglycerin rubs and copper-sulphate drops at home, but discontinued this treatment herself. She returned April 20, 1925, when the conjunctiva showed many scars, some follicular involvement of the right eye, with slight pannus. Under boroglycerin rubs for four months the acute symptoms were relieved, and the patient again discontinued treatment. She returned July 14, 1926, with increased cicatrization of the conjunctiva, slight ptosis, and a thickening tarsus of the right eye. Vision was O.D. 6/30, O.S. 6/30. Under boric-acid rubs with dionin, vision improved to O.D. 6/15, O.S. 6/15 on October 1st, and the lids were much improved.

(7) A. S., white male, aged 16, was first seen March 1, 1926, when he had acute trachoma of both eyes, with marked follicular involvement and considerable discharge. The lids were rolled and treatment with boroglycerin and 1-per-cent silver nitrate instituted. On June 8th vision was O.D. 6/60, O.S. 6/60. The patient was then put on boric acid and dionin powder, and on September 29th vision was O.D. 6/30, O.S. 6/24.

(8) M. W., white female, aged 16, was first seen May 3, 1926, suffering from acute trachoma of both eyes, marked follicular enlargement, and slight pannus of the left eye. The roller operation was done May 10th, and on discharge from the hospital the eyes were treated with 1-per-cent silver nitrate until July 14th, when the treatment was changed to boric acid and dionin powder. Vision was O.D. 6/24, O.S. 6/24, which improved by October 1st to O.D. 6/7.5, O.S. 6/7.5.

(9) D. M., white female, aged 12, was first seen September 7, 1923, at which time there was vascularization involving the temporal half of the cornea with considerable follicularization of the conjunctiva involving the right eye only. This was not a case of typical trachoma. The Wassermann was negative, and the chest negative for tuberculosis, as was the tuberculin reaction. The treatment prescribed was 1-per-cent silver nitrate, boroglycerin rubs, and copper-sulphate drops at home. The lids improved, but the folliculosis did not totally clear up. Vascularization decreased, but did not entirely disappear. Boric acid and dionin were started July 7th, but with no improvement.

Corneal Scarring

(1) Z. P. presented an old central scar of the right cornea, of indefinite etiology and three years' duration. He was first seen July 2, 1926, when the vision was O.D. 6/60, O.S. 6/6. He was put on dionin powder every other day, supplemented with 1-per-cent yellow-oxid ointment night and morning. On August 2d vision was O.D. 6/24, O.S. 6/6; on September 12th, O.D. 6/12, O.S. 6/6; and on October 1st, O.D. 6/12++++, O.S. 6/6.

(2) G. W., white female, aged 12, had a scar at the center of the left cornea of six months' duration, which had followed an ulcer. Vision on August 2, 1926, was O.D. 6/6, O.S. 6/24. Following administration of dionin powder on alternate days, and yellow-oxid night and morning, on October 2d vision had increased to O.D. 6/6, O.S. 6/7.5+.

(3) H. C., white female, aged 10, was first seen August 2, 1922, at which time there was marked corneal scarring of both eyes caused by an old phlyctenular keratitis. No active lesions were seen. She was put on dionin 5-per-cent and 2-per-cent yellow oxid of mercury on alternate nights. Vision was O.D. 6/30, O.S. 6/30. She was kept on the treatment for three monthly periods with a monthly rest period between, and on July 14, 1926, vision was O.D. 6/15, O.S. 6/15.

Interstitial Keratitis

(1) G. E., white male, aged 16, was first seen June 28, 1926, when he stated that his right eye had been sore since the 20th. There was marked interstitial involvement of the right eye without great ciliary irritation. The Wassermann was four plus, and vision was O.D. 1/60, O.S. 6/75. He was put on appropriate general treatment, together with atropin 1 per cent and dionin powder on alternate days. On July 10th the vision was O.D. 1/120, O. S. 6/12; on August 20th it was O.D. 6/7.5, O.S. 6/7.5; and on September 13th it was O.D. 6/6++, O.S. 6/7.5. There was never any vascularization. The patient gave a history of the left eye being sore about six years ago, but his account of the treatment at that time was not reliable. It, however, showed three large corneal scars, and the vision did not improve so much as in the right eye.

(2) J. W. was a white male aged 45. Following an injury received in the mill where he worked, the right eye became red and painful. It was seen by the mill physician, who referred the case. When first seen, three days after injury, there was a central area of interstitial keratitis, with marked iritis and general uveitis. The Wassermann was three plus. The treatment prescribed was atropin 1 per cent every three hours, hot compresses, dionin 5 per cent every three hours, and salvarsan and mercury for the general condition. The patient was discharged from the hospital in ten days with the eye quiet except for interstitial involvement and slight iritis. Dionin powder on

alternate days and atropin 1 per cent t.i.d. were continued for eighteen weeks, by which time the eye was quiet, cornea clear except for three patches of opacity, and the vision with correction O.D. 6/12, O.S. 6/7.5. There was no vascularization of the cornea. This man should have received compensation for the time lost.

(3) E. M., white female, aged 18, reported that the left eye was inflamed and red on November 2, 1925, although she was first seen on the 23d, at which time opacity involved the temporal third of the cornea. Treatment was started with yellow-oxid ointment and atropin 1 per cent t.i.d. The Wassermann was four plus with both antigens. Beginning December 11th, dionin 5 per cent was administered once daily, and salvarsan and mercury were given for the general infection. This local treatment was continued until June 30, 1926, when ciliary injection still persisted slightly and there were a number of opacities on the cornea. There was never any vascularization. At this time (June 30) atropin was stopped in this eye, as involvement was beginning in the right eye. This eye was treated with 1-per-cent atropin t.i.d. and dionin powder in both eyes on alternate days. Vision at this date was 20/40 with each eye. September 1st involvement in the right eye was all cleared up except for about 1 mm. from the upper limbus from "10 to 4 o'clock," which was not involved until the remainder of the cornea began to clear. Vision at this time was 20/30 in both eyes. September 24th there was a thin line involvement of the upper limbus, and slight pericorneal injection near this involvement. Vision in both eyes was 20/30. By October 2d the eyes were clear except for two small patches in the right, and one in the left. Vision was 20/20 in each eye. In this case the second eye was involved eight months after the first, though the patient was under vigorous antiluetic treatment. The first eye had 5-per-cent dionin for six months and is not so clear as the second after three months of dionin powder.

(4) R. S., white male, aged 26, was first seen April 7, 1926, at which time the right eye was inflamed, with marked ciliary irritation, a few interstitial patches in the cornea, deposits on Descemet's membrane, and edematous and discolored iris. The duration of the condition has been five to ten days. Treatment was begun with atropin 1 per cent, dionin 5 per cent, and heat. The patient was referred for a nose and throat examination, and the septum was reported deflected and the turbinates swollen and boggy. Genito-urinary examination showed the prostate somewhat swollen and boggy, but the seminal vesicles normal although there was some pus in the discharge. The Wassermann was first reported negative due to a mistake in names in the laboratory, but later positive. Following the negative report, 10 c.c. of aolin was given and repeated three times a week for three weeks. Dionin powder was started April 17th. Vision at this time was O.D. 6/5, O.S. 6/30. By May 24th the left eye was clearing nicely, but involvement started in the right eye. Atropin was stopped in the left eye and started in the right. Dionin powder was used on alternate days in both eyes. Vision was O.D. 6/24, O.S. 6/24. June 10th it had become O.D. 3/60, O.S. 6/12. By July 30th both eyes were clear except for a few small patches. There was still some deep irritation, with deposits on the posterior layers of the cornea visible with the slit lamp. Vision was O.D. 6/5, O.S. 6/5. The patient who had refused specific treatment, discharged himself at this time.

(5) E. S., white female aged 17, was first seen June 18, 1926, when the right eye showed rather dense central involvement of the cornea, with considerable vascularization, and the left eye presented some injection at the limbus with several patches of scarring on the cornea. There was a history of involvement of this eye a year before, at which time the patient had eight arm and six hip injections. The Wassermann was four plus. The treatment prescribed was atropin 1 per cent t.i.d., dionin powder on alternate days, and salvarsan and mercury internally. On September 27th there was still considerable scarring of both corneas, rather marked vascularization of both eyes, and vision with correction O.D. + 8.50+ 2.50 co x 90 = 6/24; O.S. + 8.00+ 2.00 co x 90 = 6/30. This patient is a high hyperope, which explains the poor vision obtained, though there is better vision with one eye than the other, and improvement will, we feel, continue further. There is much less vascularization in the dionin-treated eye than in the other.

(6) B. R., white female aged 17, was first seen February 13, 1926, when the left eye had been sore three weeks. There was marked interstitial involvement with slight vascularization visible only with the slit lamp. The Wassermann was 4 plus. The treatment prescribed was atropin 1 per cent t.i.d., dionin powder three times a week, and salvarsan and mercury. There was one small patch of vascularization at "7 o'clock" and one spot of involvement in the right eye at "11 o'clock." Vision was O.D. 6/30, O.S. hand movement at one foot. On March 16th there was no increase in vascularization. On the 30th there was some increase in vascularization, and two small spots in the right eye at "7 o'clock." Dionin treatment was continued, and on June 24th the eye was quiet, with a small patch of opacity above the center of the cornea. Vision was O.D. 6/30 + 0.75 = —2.00 co x 15= 6/5; O.S. 6/30 + 0.75 = —2.00 co x 180 = 6/6.

(7) G. W., negress aged 7, was first seen on June 7, 1926, at which time the left eye showed marked central involvement of the cornea, and the right eye showed a small spot at "9 o'clock." Atropin 1 per cent t.i.d. and dionin powder three times a week were prescribed, together with salvarsan and mercury. By July 30th the left eye was clearing, but the right showed many small spots scattered over the cornea. The vision was O.D. 6/30, O.S. fingers at one foot. On September 27th both eyes were clearing, but more slowly than most of these cases and vision was O.D. 6/30, O.S. 6/30 illiterate. This case had very little ciliary irritation, and the involvement of the second eye progressed but slightly. There is a central opacity which is clearing nicely. It has been our experience that the corneal structures of the negro react more strongly to all pathologic inflammatory conditions than do those of the white race.

(8) R. R., white male aged 13, was first seen on June 9, 1926, when the left eye had been sore ten days. There was a dense central opacity and marked ciliary injection. The Wassermann was four plus. Treatment consisted of atropin 1 per cent t.i.d., dionin powder three times a week, and salvarsan and mercury. On September 24th vision was O.D. 6/7.5, O.S. 6/7.5. The cornea showed four small patches of scarring and slight vascularization. On October 4th the cornea was clear except for one patch of scarring near the center. Vision was O.D. 6/7.5, O.S. 6/7.5.

(9) G. A., white female aged 17, was first seen February 17, 1926, at which time there was interstitial involvement of both eyes coming down from above, marked iridocyclitis, and many old vessels in both eyes. She gave a history of similar trouble ten years before.

when she was given some internal medication which cleared the eyes. The Wassermann was 4 plus. The treatment instituted was atropin 1 per cent t.i.d., salvarsan, and mercury. Dionin powder had been administered three times a week for two months when she left town. The eyes were clearing nicely, but the results would have been better with more treatment. Vision was O.D. 6/7.5, O.S. 6/24.

(10) J. H., white male aged 8, was first seen May 3, 1926. There was a central opacity of the left eye of 3 days' duration. Vision was O.D. 6/7.5, O.S. fingers at two feet. The Wassermann was four plus. He was given atropin 1 per cent t.i.d., and dionin powder three times a week, together with salvarsan and mercury. On July 13th the cornea showed two small patches of opacity. Vision was O.D. 6/7.5, O.S. 6/7.5. There was no vascularization.

(11) L. W., male negro aged 4, was first seen August 9, 1926, when central involvement of the right eye and marked deep injection, but no vascularization, was present. The Wassermann was 4 plus. One-per-cent atropin was given t.i.d., dionin powder three times a week, and salvarsan and mercury. On August 23d central involvement of the left eye began. By September 27th both eyes were clearing nicely from the periphery towards the center. There was no vascularization. Measurement of vision was impossible due to the age of the patient.

Lime Burn of the Cornea

D. M., white male aged 32, got lime in his left eye on November 5, 1925. No treatment was received for two hours, when he was seen by the local physician. He was referred the next day, when it was found that the lower inner two-thirds of the cornea was smoky, with the lids swollen and covered with a false membrane. Under the slit lamp, starlike whorls and general lymphatic involvement of the cornea were visible. The patient was in the hospital for seven weeks under treatment with atropin, bichlorid ointment, and hot compresses. On discharge, the upper lid showed marked scarring of the conjunctiva, with buckling of the tarsal plate. The cornea was covered with a dense crystalline layer immediately under the outer layer. There was considerable vascularization in the superficial layers of the cornea and marked ciliary irritation. Vision was limited to ability to count fingers at one foot. Treatment instituted was massage of the tarsal plate, alcohol to the limbus, and dionin powder on alternate days. By March 8, 1926, the scar was thinning, and the crystalline deposits were breaking down in cracks, especially at the center and towards the nasal side of the cornea. Vision was 6/24+++. Improvement was continuing on April 29th, and vision was 6/15+. On June 28th the process was further improving, vascularization was decreased and vision was 6/15+++.

ABSTRACT OF DISCUSSION

On Dionin in Ophthalmology

Edward B. Heckel, M.D. (Pittsburgh, Pa.): There is no doubt in the minds of most ophthalmologists of the value of dionin as a therapeutic agent, although there may be some little difference in the manner of using it—whether in aqueous solution or powder. It has a decided action on the circulation of the eyeball, not only in the cornea, but in some of the deeper structures. It is therefore useful in deeper lesions of the eye. It will undoubtedly clear up a number of dustlike opacities in the lens, although in the larger opacities where there is interference with light, it is not effective. Atropin also has a decided influence on corneal circulation, and some of these cases of destructive processes in the cornea will do well under atropin alone, but many are stimulated by the addition of dionin.

As to when to use dionin, it is not so much what we do as how we do it. Bearing in mind that the eye acquires a so-called immunity to the drug, it is wise to interrupt its administration occasionally, because it must be used over a long period of time. It is our practice to use the aqueous solution, 20 grains to 4 drams. We use it twice a day continuously, skipping Saturday and Sunday and sometimes Monday. Some use it five days and omit it five days, depending upon the nature of the case. The reaction is usually rather definite and positive the first time, but in some cases there is practically no positive reaction except a little smarting. The local edema is not great. In corneal lesions it appears to have its greatest use in recent destructive processes.

One of our striking cases was that of a railroad fireman whose left eye was injured April 8, 1925, resulting in a large ulcer on the left cornea. He had been under treatment for some time before we saw him in May. At that time there was a deep ulcer, argyrol stained that involved a large part of the cornea. He was put under the usual treatment of hot compresses and atropin. Later, we combined atropin with dionin, using two grains of the former and twenty grains of the latter to a half-ounce mixture. We use a solution of mercury cyanid 1:3000 instead of water. When we first saw the patient, vision in the left eye was reduced practically to light perception, and there was a certain amount of infiltration of the cornea. He was last seen October 4, 1926. In the meantime he had been working. The vision of the left eye had increased so that he was able to pass the test of the railroad and return to his former occupation.

Another patient came with a large marginal lesion of the cornea which involved, in the course of time, the lower segment of the cornea, extending into the pupillary area. We saw him first on June 20th, 1924, when hot compresses, atropin, and dionin were used. The vision was 20/200. When last seen October 5, 1926, he was still using dionin, and the vision had risen to 20/40 uncorrected.

These two cases illustrate the length of time over which dionin must be used. The matter of a few months is nothing; in some cases it is a matter of years.

Conrad Berens, M.D. (New York, N. Y.): Excellent results have been obtained from the use of dionin, in my experience. Dionin powder is administered in the office, and patients are sometimes permitted to use it at home after the dosage has been increased from a 1/10-per-cent to a 10-per-cent solution. Patients are frequently frightened by the dionin reaction, so we use a 1/10-per-cent solution to start with, and have printed at the bottom of the prescription blank: "Dionin usually produces slight pain, redness, and swelling, and this reaction is desired. Use a 2-per-cent boric-acid solution after five minutes."

Results in treatment of scarring of the cornea after trachoma have been most gratifying. I recall two brothers each of whom had lost one eye and whose vision in the other was markedly impaired. One boy, with vision of 3/200 was in a school for the blind. After 16 months' treatment, vision was 20/100, and he obtained a position as truck driver. Naturally, at dusk,

his vision was decreased, and he ran over and killed a child. This, of course, could not have occurred if we had nationally adopted visual standards for drivers of motor vehicles.

Dionin is useful also in raising nonspecific resistance, and in lessening pain in many diseases of the eyes.

J. F. Klinedinst, M.D. (York Pa.): As York County is a great agricultural region, we see quite a number of farm workers with infected traumatic ulcers of the cornea resulting from abrasions by wheat, oats, rye, and corn-stalk particles. These injuries sometimes result in an opacity of the cornea. We also see a number of workers from the lime-stone quarries who have infected ulcers of the cornea from particles of lime-stone getting into the eye, sometimes resulting in opacities. For these opacities, dionin has been a valuable remedy in my practice. I use it in solution or as powder, according to the condition of the opacity. As Dr. Heckel has stated, the eye does sometimes acquire tolerance for the drug, and to secure its full therapeutic effect, it is necessary to discontinue its use occasionally for a day or two.

Charles M. Stiles, M.D. (Philadelphia, Pa.): Several years ago, when dionin first came to the attention of ophthalmologists, I was called to see a very severe case of acute glaucoma that had declined operation. The patient had not slept for a week or ten days, and was under opiates. Ten-per-cent dionin with eserin in ointment was used every two hours. In thirty-six hours the pain was gone, and although vision did not improve entirely, he was able to resume his occupation. In this case I am sure the synergistic action of dionin with eserin was the deciding factor, as it has been in several other cases under my care. I feel that the use of an ointment for combining these drugs is an important point in the treatment of severe cases, for the reason that it keeps the remedies in continuous contact with the affected eyeball.

Clinton J. Kistler, M.D. (Lehighton, Pa.): After hearing these papers on dionin today, and after attending the dry clinics at the Medico-Chirurgical Hospital yesterday where we heard of practically the same results in similar cases following injection of Pregl's solution it is a little confusing to those of us who have not had an opportunity for such large clinical observation. It would be of great interest to us to have a comparative study made of these two methods, because, so far as I am concerned, I can see no practical difference. It is a matter of considerable moment to know whether such cases shall be put under prolonged treatment with dionin or whether Pregl's solution shall be used. We have had good results with dionin, but have never used Pregl's. A comparative study of these two agents in the larger clinics should surely be of much value.

Dr. Linn (in closing): We have used dionin in many other conditions beside those mentioned (for instance, in incipient cataract), and I think we have had beneficial results, but cannot prove it. I did not attend the dry clinics yesterday, but shall be glad to try out Pregl's solution.

Dr. Stieren (in closing): The early writers felt that inasmuch as the local reaction from dionin was not manifest after a few weeks' use, it would be better to interrupt and then get the redness, irritation, and edema again. For a while we practiced this, but the patients did not seem to improve as they should, so for the last nineteen years we have been using the drug daily. Occasionally it is necessary to interrupt the treatment in cases of lymphatic diathesis where the conjunctiva becomes irritated and uncomfortable. Then we use a little astringent treatment until the follicular condition improves. The results secured are sometimes so remarkable that we are afraid to report them for fear of being accused of exaggerating.

About Pregl's solution I know very little, but I do know the good results we secure from dionin. I have given probably not more than a half-dozen injections of cyanid of mercury. Since using dionin in this intensive manner, I feel the use of cyanid subconjunctivally, or any foreign protein substance, is rarely necessary.

Symposium on Scarlet Fever *

ETIOLOGY, DIAGNOSIS, AND NONSERUM TREATMENT OF SCARLET FEVER

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Scarlet fever was first definitely described by Sydenham in 1665. Until that time both measles and scarlet fever were believed by many to be variations of smallpox. Somerset states that "for a long time smallpox was the only recognized exanthematous disease."

Probably one of the earliest observations was recorded by Rhazes, a ninth century Arabian physician, who noted that the eruption in cases he supposed to be measles was not always uniform. He found in some of his patients a more intense rash than in others, and these frequently died, whereas those exhibiting a lighter rash usually recovered.

To Sydenham, however, goes the credit of the first definitely recorded description, and it was he who named the disease. He described "the whole skin marked with small red spots, more frequent, more diffused, and more red than in measles. These last two or three days. They then disappear, leaving the skin covered with branny squamulæ, as if with powdered meal." It may be questioned whether even Sydenham fully realized the importance of his observations. Many of his confreres continued to look upon it as confluent measles. Certainly Sydenham could not have seen many cases of severe type, for he was inclined to regard it rather lightly. He refers to it with but few words, and speaks of it as "this ailment—we can hardly call it more." Finally he dismisses all reference to it by cautioning lest "we overtreat the patient by confining him to bed," and as a parting injunction warns against "superfluous and overlearned medicines," for by so doing "the disease is aggravated and the sick man dies of his doctor."

* Read before the Section on Pediatrics of the Medical Society of the State of Pennsylvania, Philadelphia Session, October 13, 1926.

In our own country, scarlet fever's first recorded appearance was in the village of Kingston, N. H., in 1735. Throughout that year it spread in the general locality, and thence to Boston. One thousand persons died, most of them children. The source was never determined. From this time it continued its spread in the following years, to all the American colonies. Since this apparently insignificant beginning in an inland New Hampshire village almost two hundred years ago, Vaughn states that we never have been without scarlet fever in the United States. He also makes the interesting observation that "the farther south we go the less scarlet fever we have." Rogers and Castellani are authority for the statement that scarlet fever practically never exists in the tropics.

Etiology

Numerous theories have been advanced as to the cause of scarlet fever. Some believed the causative agent to be one of the pathogenic bacteria, others a filtrable virus, and Mallory[1] suggested the possibility of protozoan origin. The constant finding of the streptococcus, reported for more than forty years, led to greater attention to this than to any other probable cause.

The belief in many quarters long has been that the streptococcus is the definite cause. Others looked upon it as playing a secondary, or complicating rôle, its growth and development being favored by the disease itself. At this time one cannot give more than the briefest mention of a few whose energies have been devoted to this work.

While earlier studies did not differentiate various types of streptococci, the work of more recent years has demonstrated that they form a large group, the various members of which exhibit widely different biologic and immunologic characteristics. Schottmüller, as early as 1903, produced two groups, one of which hemolyzed red blood cells, the other failing to hemolyze, or producing methemoglobin.

Dochez, Avery, and Lancefield[2] determined the existence of at least six types of hemolytic streptococci, distinguished serologically. Bliss and Dochez[3] demonstrated that most of the hemolytic streptococci found in scarlet fever can be differentiated from the same organism found in other conditions. Other workers, notably Gordon, Eagles, and Tunnicliff, pointed out that hemolytic streptococci from cases of scarlet fever belong to a group quite distinct from other types of this organism.

Certain streptococcic infections, such as throat conditions, abscesses, septicemia, and erysipelas, do not give immunity against subsequent attacks. One attack of scarlet fever, however, protects throughout life. Very naturally the question arose, "Why (if streptococci be the cause) does one streptococcic infection give immunity, while others do not?" From the evidence submitted by many, it must be believed that in scarlet fever we are dealing with an organism differing immunologically and serologically from others of the same group.

Until the work of the Dicks[4] in producing scarlet fever experimentally in human subjects, no definitely satisfactory results in experimental scarlet fever had been reported. Others had used dogs, rabbits, swine, monkeys, and apes, but little, if any, accurate work had been done with human beings. Although the evidence favored "Streptococcus scarlatinæ," this organism had been but little used experimentally. In 1914, Krumwiede, Nicoll, and Pratt[5] reported a case of scarlet fever following the accidental sucking into the mouth of a culture of Streptococcus scarlatinæ along with other streptococci. Three days after the accident, typical scarlet fever developed, beginning with sore throat. Monkeys infected with the same culture failed to develop the disease. The work of the Dicks in the experimental production of scarlet fever would seem to establish definitely the Streptococcus scarlatinæ as the cause. The constant association of Streptococcus hemolyticus with scarlet fever and the bulk of experimental evidence in recent years have led to the almost generally accepted belief (in this country at least) that the cause has been found. Exception has been taken, however, notably by Di Cristina and his coworkers in Italy. They claim to have isolated an organism—not a streptococcus—which they assert to be the causative agent. They claim to have produced the disease experimentally, both in rabbits and in human beings. The Italian investigators are convinced that they have satisfied Koch's postulates, and they also claim to have produced vaccines, both preventive and curative. They regard the hemolytic streptococcus as playing only a complicating rôle.

Susceptibility

During the early months of life, practically all children of immune mothers are also immune. Susceptibility, as determined by the Dick test on large groups of children, may be given as 60 per cent under the age of five years, 30 per cent between five and ten years, 15 to 20 per cent between ten and twenty years, and at about 15 per cent for all adults. Immunity may be established by having had one attack of the disease, or through having had frequent small doses

of streptococcic infection, or by the development by means of injections of scarlet-fever toxin or antitoxin. The establishment of artificial immunity, by injections of toxin, is not yet on a sufficiently firm basis to enable one to say with accuracy what dosage is necessary. At present the Scarlet Fever Commission advises five injections, of 500, 1500, 5000, 15,000, and 20,000 skin-test doses, at one-week intervals. These doses will give protection to most susceptibles for a period of perhaps two to three years, probably longer.

The number of injections and the time element involved offer objections to its use as a large public-health measure. One looks with hopefulness upon the work of those engaged in this phase of the subject, that a method as definite and comparable with that used in diphtheria immunization soon will be perfected.

The highest age incidence is between three and fifteen years, the greatest number occurring between five and ten years. Under one year it is regarded as uncommon, yet Allbutt[6] reports, out of 167,000 cases, 1,636 under the age of one year, of which number over 21 per cent died. After 35 years of age attacks are not common.

The infective agent comes from the secretions of the nose and throat, or from purulent secretions of complications. Desquamation is no longer regarded as a source of danger. Just what part is played by the carrier is not yet definitely determined.

Symptoms

Only the briefest consideration can at this time be given to the outstanding symptoms. The onset, as a rule, is abrupt. Fever is commonly the first symptom observed. Nausea and vomiting occur almost coincidently with the fever. So frequently does vomiting occur as to be looked upon almost as pathognomonic, being associated with perhaps 75 per cent of all cases. The pulse is accelerated disproportionately to the fever. Sore throat, varying in degree from slight discomfort to intense pain, is one of the earliest symptoms.

The tonsils and pharynx are swollen and dusky red, and soon deposits appear on the tonsils, resembling the membrane of diphtheria. On the soft palate and the roof of the mouth may be seen what constitutes an eruption on the mucous membrane—small punctate spots on an inflamed mucous surface. Woody regards this as of such importance that he says "the absence of puncta in the palate, or rather the presence of a pale smooth palate, is almost positive proof that the case in question is not one of scarlet fever."

The characteristic and distinctive clinical manifestation is the rash. It usually appears within 48 hours, although it may be delayed until the fourth or fifth day. It has been described as small pale-red points, set very close together. It is usually seen first on the neck and chest, spreading over the trunk and the extremities, reaching its maximum intensity within about 72 hours. There is usually some flushing of the face, with contrasting pallor about the mouth, which is significant.

Pastia has called attention to a phenomenon about the flexures of the elbows. It may be described as a linear pigmentation, usually deep red in color, sometimes hemorrhagic. This sign was observed by Taubles in every one of 73 cases of scarlet fever.

Coincident with the disappearance of the rash, scaling begins. The thicker skin, on palms and soles, is the last to separate. Feer[7] directs attention to a sign which may be of value in the late determination of scarlet fever. This consists of a transverse ridge or groove on the nails of the fingers and thumbs. It can be observed after six weeks and for as long as six months. It results from disturbed nutrition at the hidden root of the nail. While other acute diseases affect nail growth, Feer believes no other brings about such marked change as does scarlet fever.

Early in the illness there is a sharp increase in leukocytes, running as high as 30,000, with a gradual return to normal by the third or fourth week. There is both a relative and an absolute increase in the polynuclear cells. This evidence, the search for which is only too frequently neglected, is of great value in questionable cases.

Differential Diagnosis

Despite our increased knowledge of this condition, with laboratory aids at our disposal, with refinements and improvements in technic, there yet occur many cases of scarlet fever difficult to diagnose. Other conditions may so closely simulate it in one or more ways as to make diagnosis difficult or impossible. We are in possession of no one or more bits of evidence which enables us to say in every instance, "This is" or "this is not a case of scarlet fever."

Scarlet fever and measles. The incubation period in measles is much longer than in scarlet fever. Catarrhal symptoms are prominent in measles, whereas they are slight or absent in scarlet fever. There are Koplik spots in measles; in scarlet fever none. The eruption in measles appears on the third or fourth day; in scarlet fever on the first or second. The rash

in measles is darker, more marked about the face, tends to be discrete, is somewhat macular or slightly papular, and is irregular in distribution. In scarlet fever, there is flushed face, with circumoral pallor, a rash true to its name in color, finely punctate, confluent, with more regular distribution, and only very slightly if at all elevated. Sore throat in measles is only a part of the catarrhal involvement; in scarlet fever it is a constant accompaniment. The palate in measles is practically uninvolved, whereas it is red and shows fine puncta in scarlet fever. There is leukopenia in measles; in scarlet fever a sharp leukocytosis. Desquamation is scanty in measles; in scarlet fever marked.

German measles. In this disease there is frequently no fever and mild constitutional symptoms; in scarlet fever the constitutional symptoms are more severe. In German measles the rash is pale, more pale rose-red, and involves the whole body very rapidly; in scarlet fever it extends more slowly. Throat symptoms are practically always absent in German measles, and there is no involvement of the palate; in scarlet fever there are marked throat symptoms and the palate is involved. Leukocytosis is absent in the former but present in the latter. Consideration of the rash alone may lead to confusion or to an incorrect diagnosis. Taking into account *all* the evidence, a correct diagnosis usually can be established. The absence of sore throat, no puncta on the palate, the pale red-rose rash, the slight or absent fever, and no leukocytosis, favor German measles rather than scarlet fever.

Erysipelas. This disease does not resemble scarlet fever in its distribution nor in its development. In the former the involved areas are practically always firmer and more tender to the touch, there is a rather sharp line of demarcation with healthy skin, and the progress is indefinite and irregular.

Drug rashes. These are occasionally the cause of anxiety. While it is well known that certain drugs, notably quinin and belladonna, may produce eruptions simulating scarlet fever, they are usually simple hyperemias. Such cases differ in that prodromes and fever are absent, there is a history of drug administration, sore throat is absent, and there is no leukocytosis. Taking into account the various factors, differentiation as a rule is not difficult.

Toxic rashes. Toxic rashes sometimes resemble that of scarlet fever. A boy with a severe foot infection was admitted last winter to the children's ward of St. Francis Hospital. Within 36 hours he developed a generalized rash so closely resembling scarlet fever that some of us were puzzled. He had high fever, a questionable rash, and a high leukocyte count. He did not, however, have sore throat nor involvement of the palate. He was permitted to remain in the ward, and no case of scarlet fever developed. Judged from his rash alone we felt he probably had scarlet fever.

Unfortunately there is no single piece of evidence upon which a positive diagnosis can be made. While in most cases diagnosis is relatively easy, there occur numerous instances in which it is exceedingly difficult to say whether the patient has scarlet fever or some simulating disease. Many factors must be taken into account. *The consideration of the entire picture* is a point which cannot be too strongly emphasized. Perhaps most reliance can be placed upon abrupt onset, fever, vomiting, sore throat with involvement of the palate, the punctate appearance of the rash, and early leukocytosis. With modern bacteriologic procedures, confusion with diphtheria is no longer so common.

The Schultz-Charlton phenomenon. In 1918 Schultz and Charlton reported some interesting observations. They found, in four to six hours after the intracutaneous injection of O.1 to O.2 c.c. of normal human blood serum into a patient with scarlet fever, a local disappearance of the rash. Not only did the rash disappear in this region, but it did not return, nor did desquamation of this area take place. So frequently did they observe this phenomenon that they regarded this blanching property as belonging to normal adult serum. The rash of scarlet fever is produced by absorption of toxins. Mair believes the toxin interferes with the normal contractile element in superficial capillaries. Originally this test was carried out solely by the use of normal adult human serum, with about 60 per cent of positive results. It was somewhat puzzling why the results were not uniformly positive. Later came the development of scarlet-fever antitoxin and its use in the test. Today we know that blanching always follows the use of a serum containing antibodies, whereas negative reactions indicate the employment of a nonimmune serum. Antitoxin always produces blanching because of its antibody content.

This valuable test is carried out by injecting O.1 to O.2 c.c. of scarlet fever antitoxin, *intradermally,* where the rash is most pronounced. It must be done *early in the disease before the rash begins to fade.* If the rash be due to scarlet fever, there follows in four to six hours blanching of the skin for several inches about the site of the injection. This area stands out in sharp contrast with the rash itself. In any doubtful

rash this is a test of great value, since other eruptions are quite uninfluenced.

Treatment

Without the use of specific measures, the treatment of scarlet fever is wholly symptomatic. The general care consists in: (1). Complete isolation. Only one person should care for the patient. (2). The room should be well lighted and well ventilated. (3). Rugs, carpets, draperies, and all superfluous furnishings should be removed. (4). Floor and furniture should be wiped frequently with moistened cloths. (5). All secretions from the mouth, nose, and throat should be immediately destroyed. (6). Sterilization of sheets, towels, and all utensils.

Two other measures should be carefully carried out: First, chilling must be avoided, the patient should be kept warm, and he should remain in bed at least until the end of the third week, even with a mild attack. It is well known that nephritic symptoms most frequently appear at about this time, and not until this period has passed should the patient be permitted to assume additional risk. Second, the diet in the early stages should consist of bland foods such as milk, cereals, and fruits, with the later addition of certain vegetables. All meats and meat extractives should be omitted throughout the entire period, because of the additional burden which may be placed upon kidney structures. Medical treatment may be stated in a few words: use only those drugs which will bring comfort to the patient, and avoid all others as unnecessary or harmful.

We cannot accept the opinion, occasionally expressed, that nephritis accompanying or following scarlet fever is a harmless incident and that it usually disappears without further evidence. It is difficult to believe that a toxic condition, such as exists in this disease, produces only trivial or passing effects. If one considers the immediate results in this complication or the sequelæ, it must be admitted that only a relatively small percentage continue to exhibit kidney lesions, as shown clinically and by urinalyses. Acute nephritis merges into the chronic form so seldom after scarlet fever, that the immediate condition usually causes little or no anxiety. There is another viewpoint which has been expressed from time to time, and which should be given thoughtful consideration. Welch and Schamberg believe that the occurrence of chronic nephritis after scarlet fever has not been fully estimated. Duval[8] calls attention to kidney damage because of the intense toxemia, and sounds the warning that although apparent recovery has taken place, irreparable kidney damage frequently occurs. Selective action of the toxin upon the capsular epithelium produces an inflammation of this tissue. There follow, in time, degeneration and collapse of tubules. Insidiously and progressively there is instituted chronic interstitial nephritis. Finally, there is disproportion between the work thrown upon these organs and their ability to function under stress or strain. While the original injury may cause relatively few symptoms, of brief duration, the ultimate damage, as exhibited in later years, may be very great. Duval further considers the renal injury as "a constant accompaniment," and voices the opinion that "the kidney lesion is the essential pathology of the disease."

The efficacy of any treatment must be measured by its results. While certain refinements in treatment have been evolved, no epoch-making improvements in nonspecific treatment have been made throughout all the years we have known this disease. If advances have come, they are largely through relinquishing such drugs or procedures as have done patients no good, or which in many instances have been harmful. It is to be hoped that the efforts and struggles of that large number of workers who so patiently through the years have sought first the cause and then the cure are about to be rewarded. It would appear from the promising results so far reported in the use of specific measures that at last there is relief from a devastating and crippling scourge which for so many years has afflicted mankind.

Highland Building.

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SEROLOGIC TREATMENT OF SCARLET FEVER

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These remarks are not only extemporaneous but are based only upon impressions, because I have not yet felt justified in collecting mathematically my data on the treatment of scarlet fever.

This disease has a rather low mortality, although we realize that the complications are a serious menace to the future of the patient, as for example, conditions following otitis media or

mastoiditis, or the production of a possibly fatal nephritis. The problem of evaluating the use of antitoxin in scarlet fever, therefore, presents two phases: first, whether or not there is a reduction in the complicating conditions; second, whether, over a long period of time, there is really a diminution in the death rate.

In the city of Philadelphia we had 3,353 cases of scarlet fever in 1924, with 42 deaths; and in 1925, 4,754 cases, with 75 deaths. This is a rather low mortality for so serious a disease, and to decrease such a rate it will be necessary to work for a number of years with an antitoxin before it can be definitely stated that anything has been accomplished with this therapeutic agent.

In the Philadelphia Hospital for Contagious Diseases we at first used antitoxin in every case of scarlet fever. Later, we discontinued its use in the milder cases, using it exclusively in the more severe cases that presented some degree of angina of the throat or swelling of the glands of the neck. We limited its use because the serum sickness was very distressing, and the children with mild attacks of the disease appeared to feel worse from the use of antitoxin than from the scarlet fever.

During the last six months there has been a material drop in the number of nephritis cases. Whether or not this is due to our particular run of cases remains to be proved by the continued use of antitoxin. There appears to have been little, if any, reduction of ear complications. I am not prepared to give figures to prove these assertions, but hope to have records compiled within a year which will show, eliminating the fault of undue haste, whether or not there is a reduction.

The use of serum has not materially shortened the course of the disease, but has induced a temperature drop and rendered the child more comfortable unless serum sickness intervened. The period of desquamation has proceeded about the same. It is our impression that some deaths have been prevented by using antitoxin in severe cases.

As a prophylactic measure, it must be borne in mind that it confers only a passive immunity. We have used it to protect exposed wards and institutions, and feel that we have had considerable success. I should be reluctant to say this publicly if we had tried it in only a small number of cases, but in the wards of the Philadelphia Hospital for Contagious Diseases, which are at times densely populated, we have frequently used serum after exposures, and it has given us considerable encouragement. While cases of scarlet fever have developed in these wards, there have not been so many secondary cases as there were prior to the use of the serum.

The reaction, of course, is the protein reaction that follows the use of any antitoxin, but it is far more severe than that following injection of diphtheria antitoxin.

The use of the Dick toxin for immunizing purposes has not been successful in my hands. In a number of cases it will produce a negative Dick test for a variable period of time; but the toxin—or, as we call it erroneously, the toxin-antitoxin—of scarlet fever is a failure as we are advised to use it. If I were to say that it is efficacious at all I should be treading on dangerous ground unless I went into detail regarding scarlatinal toxemia induced by large doses of toxin. To say that this toxin will sometimes produce a negative Dick test is as far as I care to go.

The Dick test itself is not always reliable in determining susceptibility to scarlet fever. In a large group of children who had been Dick-tested, numerous cases occurred subsequent to the test, although it had been negative. In other groups of individuals, I have found, in one instance, 12 per cent who gave positive Dick tests, and in another, 20 per cent, after bona-fide attacks of scarlet fever, recognized and identified, not by one, but by several persons who were unquestionably qualified to pass upon this subject. All were typical cases. This percentage does not by any means agree with our clinical experience. We do not believe that 12 to 20 per cent of individuals who have had scarlet fever are still susceptible to this disease. The incidence is probably not any higher than 4 per cent—possibly not that high.

These discrepancies are largely due, I believe, to the fact that the standard for the serum is not the same in all laboratories. No doubt the Scarlet Fever Commission will some day work out a plan by which the toxin may be standardized. If this is not done, the antitoxin will not be up to standard, and therefore less reliable as a cure or preventive. If the toxin is too weak, there will be too many negative tests; if it is too strong, tests will be positive which should be negative. This is a problem which must be worked out in the laboratory rather than in private practice or private institutions. If the laboratory workers can produce an antitoxin that will neutralize a given amount of toxin, this treatment should prove of very real value.

The Schultz-Charlton reaction diagnostically is not a pathognomonic sign in scarlet fever. If an antitoxin below the standard is used,

blanching does not occur when it should. I have seen antitoxins from different laboratories, one of which would blanch the rash, when another, applied to the same individual on another part of the body, failed to produce this effect. Yet these antitoxins were supposed to have been standardized uniformly.

Therefore, I do not feel that it is wise, at this time, to use any of these biological preparations without considerable care, having due regard for the fact that inaccuracies are bound to occur as a result of their still unsatisfactory standards of preparation.

345 S. 19th St.

ABSTRACT OF DISCUSSION
Of Symposium on Scarlet Fever

JAMES M. JOHNSTON, M.D. (Huntingdon, Pa.): Perhaps we too often neglect medical treatment in cases of scarlet fever, especially when there is a severe attack. I have noticed that the majority of cases require very little treatment, the affection being light, but about 25 per cent are severe, and those that have the advantage of ordinary medical treatment make a better recovery than those that are not under treatment.

J. L. FOSTER, M.D. (Pittsburgh, Pa.): If we could forget the term "scarlatina," and consider doubtful cases as scarlet fever, take our cue from the cardiologist, put the patients to bed and keep them there, giving them absolute rest and avoiding chilling, we should usually prevent complicating nephritis and otitis media. One of the greatest errors is to permit a patient to be up too soon after a mild case.

A. L. DEWEES, M.D. (Haverford, Pa.): I believe scarlet fever is much more common than we assume, that there are many more cases than are recognized, and that few of them show a typical rash. Susceptibility to the infection varies, and during epidemics all degrees can be seen, from a slight redness with fever that lasts only a day or two, to the severe case with typical rash and other symptoms.

Clinical Reports*

THE AMOSS ANTI-ERYSIPELAS SERUM IN THE TREATMENT OF ERYSIPELAS

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PHILADELPHIA GENERAL HOSPITAL

October is the month when erysipelas is at about its lowest ebb. The morbidity curve from this disease reaches its lowest point with us in August, and slowly rises to its maximum incidence in March or April. During the last ten years we have treated about two thousand cases.

Some time ago I read a rather interesting sketch by Nunnelly, of Leeds, regarding erysipelas forty years before Fehleisen published his monograph. It was then supposed that this disease was a deep-seated morbid process, the rash being but a local manifestation. Today, about an equal length of time since that monograph was published, we have learned more about the streptococcus, but the treatment of erysipelas is almost the same as in 1884. Some of us still believe that there is safety in colors, and that unguents which are red or black are efficacious—the former for erysipelas in the white, and the latter for the patient of color *(similia similibus curantur)*. Recently, the attack has been on the streptococcus itself. With the advent of mercurochrome, it was hoped that this dye would meet the streptococcus in the lymphatic spaces, and that the death grapple would be lethal to the microörganism. This hope was unfounded, and it seems now that the successful treatment of erysipelas lies in the discovery of some specific serum.

Dr. Amoss, of Johns Hopkins University, has done some fine pioneer work along the line of the isolation of a specific erysipelas strain of streptococcus and the preparation of a serum therefrom. His work has given rise to one of those somewhat unhappy medical strifes as to priority which sometimes develops, a similar study being carried on in a somewhat distant city. However, since we had at this hospital considerable clinical material, and since a serum from this particular strain was being developed by a near-by biological house, we had an opportunity to observe its effect in a small group of patients.

Dr. Amoss and his colleagues feel that at present the specificity of the erysipelatous strain is more or less in the experimental state, and that if a specific result is observed in three-fourths of the cases treated, they will be well pleased. It is an interesting fact that 84 or 85 per cent of the cases we see are facial in type, and that they run eight, nine, or ten days. Of course, if treatment of any kind is instituted at the proper time, a favorable result will be surely forthcoming. So far, we have treated about 25 cases with serum. From such a small group it is difficult to estimate properly the true value of this therapeutic agent.

Last winter we used about 3,000 c.c. of the stock antistreptococcus polyvalent serum. In some cases the temperature response was rather startling, while in the next case, similar in every clinical respect, there would be no response at all. As the result of the use of the stock serum in a comparatively large number of cases, we felt that we had gained practically no favorable information. Virtually any foreign protein, such

* Abstracts of papers by members of the staffs of various Philadelphia hospitals, presented at the clinical meeting of the Section on Medicine of the Medical Society of the State of Pennsylvania, held at the Philadelphia General Hospital, October 13, 1926.

as horse serum, might have shown the same percentage of apparently beneficial results.

The first patient upon whom we used anti-erysipelas serum was a nurse, in the second day of a facial erysipelas. As I remember, the rash developed in the neighborhood of the right ear, and had proceeded to the midline. We administered, intravenously, 100 c.c. of the anti-erysipelas serum, and the temperature drop was startling in its promptness. Even more definite was the cessation of the advance of the edge of the rash. Horse serum will often produce a rapid temperature decline, but the test of specificity is whether the process advances or shows a tendency to fade, the edge becoming less elevated. This case had a rather abbreviated course, recovery being prompt and uneventful.

In another patient, admitted the second day of the disease, the same amount of serum was used, but on the fourth day of the disease. This looked very much like a specific action. The rash began to fade, the edge ceased to advance, and the patient's general condition improved.

In a third case the concentrated serum was used. The biological house manufacturing this product felt that 100 c.c. was a rather large dose, and that it would be wise to lessen this dosage by employing a concentrated serum. We had to feel our way to find the proper dosage. We first injected but 5 c.c., but secured no result of any kind. The process continued advancing for six or seven days, with decline by lysis and no apparent favorable results from the serum. We had no idea of the proper dosage and neither had the biological house, the idea being not to do any harm by overdosage.

In a fourth case we did not give any serum at all. It is unfortunate, for the marked critical decline of fever would have compared very favorably with the others in which serum was used.

In other cases in which we were using the concentrated serum in 20- and 50-c.c. doses, the cases ran their regulation course, which, so far as we know, would have been the case if no serum had been given.

Our conclusions regarding the use of the serum in a limited number of cases are that, while in some instances a rather specific action is seen, there is a group in which the serum apparently has no effect at all. In other words, Dr. Amoss and others who have studied this matter of specificity of strain feel that there are organisms which morphologically cannot be separated one from the other, and which react not at all to the anti-erysipelas serum.

It would seem that in most cases in which the urine is loaded with albumin and the patient is exceedingly toxic, particularly in erysipelas migrans, the use of the serum is most justified. In the facial cases which recover within a few days, and which are not particularly toxic, it is hard to say that a serum which costs five or six cents per c.c. is economically and clinically justified. It seems to me that the specific serum has its best use in the toxic cases in which the shortening of a day or two in the course of the disease may mean saving the patient's life.

The speaker exhibited temperature charts of patients discussed.

DISCUSSION

QUESTION: Have you tried the serum in infants?

DR. DOANE: Yes. In the second case to which reference was made there was great edema of the scalp, with sloughing from pressure and lack of blood supply. After two doses, I thought the child improved and the toxicity was lessened from the use of the serum.

QUESTION: Do you use tincture of ferri chlorid?

DR. DOANE: No, we do not use this drug.

THE INFLUENCE OF FOCAL INFECTION ON DIABETES

RUSSELL RICHARDSON, M.D.
HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA

We are all familiar with the large part played in the causation of diabetes by the acute infections, but chronic infection is apt to be overlooked, and because of its insidiousness it can do a great deal of damage. It definitely shortens life in many cases. The following cases are illustrative:

CASE I. A woman aged 43 has been under our care for two years, with a history of diabetes for one year previous. There was sugar in the urine, and she had most of the usual symptoms. The blood sugar was not estimated when she came to us, but diabetes seemed established. On restriction and rearrangement of diet the symptoms were relieved, and she remained sugar-free for some time. She then developed lessened tolerance, and at the same time arthritis appeared. On further study from the viewpoint of focal infection, her teeth were found to be in bad condition. Removal of a number of the teeth had no effect, and all of those remaining were taken out on a diagnosis of pyorrhea and some apical foci.

During this time she was kept sugar-free on 100 grams of carbohydrate a day. The arthritis disappeared, and along with this there was a definite improvement in her sugar tolerance, so that her diet was rearranged to include 200 grams of carbohydrate three times a day, without reappearance of sugar in the urine. Now

she sometimes eats more than that and even takes forbidden sweets, but without recurrence of sugar even the day after she has eaten ice cream.

In this case there is marked improvement resulting from removal of foci of infection around the teeth. The patient's general condition is very satisfactory, and the diabetes is greatly improved.

Case II. A woman aged 42 has been diabetic for four years, coming to us a year ago. She had much the same history as the other, with high blood sugar and high urinary sugar. We could not get her sugar-free without insulin, and to metabolize 50 grams of carbohydrate a day she required 65 units of insulin—45 in the morning and 20 in the evening. Even on this she did not do very well, for with the least slip in diet she would have sugar in the urine.

A gastro-intestinal condition developed which was followed through the various clinics, and was diagnosed as due to the gall bladder. She was operated upon, and gall-stones and chronic cholecystitis found. The gall bladder was removed, and she underwent a slow convalescence. Because of her diabetes, she was not allowed to be about so soon as otherwise she would have been. She has now been out for a number of months, and we find we can keep her on 50 grams of carbohydrate without any insulin and the urine will be sugar-free while the blood sugar will stay within normal limits. There is a definite increase of tolerance in this patient on exactly the same diet. This is a light diet, and we shall probably return to perhaps 5 or 10 units of insulin in order to increase it to a more palatable point. The advantage will be just as great even though she has to take small amounts of insulin.

At the University clinic we try to impress upon our students the fact that the diabetic condition must be relieved as much as possible by eliminating the sugar either through diet or through insulin with diet, but that this is only half of what must be done for the patient. A careful study must be made in order to determine whether there is any focal infection which aggravates the diabetes, causing the patient to go down hill either gradually or rapidly. Until this has been done and all focal infections have been found and eradicated, the patient has not been properly treated. These two cases are good examples of what can often be done in cases of diabetes.

DISCUSSION

Question: How many calories per day do you allow the patients?

Dr. Richardson: We allow approximately thirty to begin with, but work this out in accordance with their weight and strength. These two patients have been fortunate in getting along on a low diet and maintaining their weight. One of them is on a diet of less than 1,500 calories. She exceeds this occasionally, but this is her usual allowance.

Question: What was the second patient's blood sugar?

Dr. Richardson: It was in the region of normal—120 to 130.

THE CONTROL OF CARDIAC PAIN

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Whatever difference of opinion there may be concerning the mechanism of pain production in and around the heart and aorta, there seems to be a perfect accord in what constitutes the best measures for the control of such pain. For years, medical textbooks and literature have treated of this therapeutic niche with more or less uniformity, and it is only recently that some new suggestions have been made for the relief of those afflicted with angina pectoris. It is generally said that the treatment is that of the paroxysm and that of the interval.

For the acute attack, local measures are always suggested. Hot water bags, ice caps, mustard plasters, and leeches give relief with variable success. The vasodilators, of course, are universally recommended from the medicinal standpoint. Amyl-nitrite inhalations, nitroglycerin, sodium nitrite and erythrol tetranitrate constitute the most frequently used of this group. Amyl nitrite is the most rapidly effectual, and therefore the most fleeting in effect; erythrol tetranitrate is the slowest in action, but produces the most lasting effect of the four. The last three of these drugs all become more rapidly efficient when allowed to dissolve under the tongue. This is a useful thing to remember in connection with many drugs ordinarily administered hypodermically when one is without a syringe in an emergency. Alcohol, in the form of brandy or whiskey, and diffusible stimulants, such as the spirits of ether, chloroform, and ammonia, are generally useful in the paroxysm. The latter preparations promote gaseous eructation which seems often to end the attack. Usually some one or a combination of these suggestions when executed will give relief to most patients, but there are instances when one must resort to morphin hypodermically, or even inhalations of chloroform. Finally, when these latter procedures give no relief, the prognosis for the attack must be regarded very seriously and it often ends fatally. I have come to regard their failure to act as strong evidence that

one may be dealing with the anginal pain of coronary embolus or cardiac infarction.

For the interval between attacks, it is generally wise to regulate the patient's physical and emotional activities so that they will be short of pain production. It is undoubtedly worth while to remove any foci of infection. It has been the experience of many doctors that cardiac pain tends to grow less, or indeed end, in some patients when infected teeth are extracted, tonsils enucleated, etc. From the dietary standpoint, these patients should be allowed a maintenance intake if they are not overweight. If the latter situation exists, it is important to attempt weight reduction by a reduction of the caloric consumption. It is probably of value to cut down on carbohydrate, since this type of food tends to produce tympanitic distention. The use of frequent small feedings is indicated. It is also the belief of some that various types of baths are worth a trial; notable among these are the Nauheim variety. Potassium iodid has enjoyed a noteworthy reputation in the treatment of this affliction—with what justification I cannot say. If anemia is presented by these patients, it should be dealt with in the accepted way. For Wassermann-positive cases, of course, antisyphilitic treatment should be instituted. There is no uniformly accepted method of treating such patients. There are those who use mercury and the iodids, others the arsenicals, others the bismuth preparations, and now some of our friends here in Philadelphia are most enthusiastic about the use of a preparation which is probably a combination of an arsenical and a bismuth compound. What constitutes the best treatment of the syphilitic cardiovascular patient remains to be answered by clinical research.

Dealing as we do in cases of cardiac pain with a difficult situation, it is rather unreasonable to expect too much in the way of results. Under such circumstances, surgery entered this therapeutic field in 1921, when Jonnesco suggested cervical sympathectomy, including a section of the stellate ganglion on one or both sides, for the relief of cardiac pain. In 1923 Wenckenbach advocated the section of the depressor nerve on the left side and at times on the right. Since then at least six other operations have been sponsored by various men to cope with angina pectoris. It is rather difficult to evaluate the results of surgery Thus far, not enough time has elapsed and too few cases have been treated in this way. The various types of operations are not unattended by a mortality, and the relief of pain does not always seem to be permanent. Some are quite enthusiastic about the results. It would seem fair to say for various reasons that surgery is still an experiment in the treatment of angina pectoris.

Recently Dr. Swetlow has practiced what he styles paravertebral alcoholic block in cases of cardiac pain. In this connection, I wish to present a case in which fifteen months ago a gradually increasing dyspnea on exertion developed, then substernal attacks of pain, first radiating to the left arm, then to both arms, and then including both sides of the chest. During the summer months these rather typical anginal attacks occurred, even when the patient was resting in bed. On occasions, codein sulphate was used to obtain relief. Following the technic of Swetlow and his coworkers, we tested out this patient for areas of chest hyperthermesthesia and hyperesthesia. We failed to find such areas. Inasmuch as hyperalgesia was universal in the chest, we thought best to try only a few paravertebral alcoholic injections. On September 15th we attempted to inject the second, third, and fourth intercostal nerves on the left side. This was followed by complete relief of pain on the same side, but pain still persisted on the right. Ten days later there was some return of pain on the left side, when on September 25th we attempted to block the fourth, fifth, sixth, and seventh intercostals on this side. Since this time, the patient has been much relieved, and is able to be up in a wheel chair and attempts short walks on the level. He still experiences much dyspnea, but no severe pain. Although he has had this satisfactory hemilateral relief, we have been unable thus far to demonstrate any areas of peripheral anesthesia corresponding to the intercostal distribution of the nerves injected.

The technic, as described by Swetlow, is to search for areas of hyperesthesia, hyperthermesthesia, and hyperalgesia. The intercostal spaces are selected for injection which supply such peripheral skin areas. The patient lies on the side opposite to that in which the injections are planned, with thighs and neck flexed on the body. A line is drawn on the skin over the vertebral spinous processes, and points are selected for injection over the ribs above the intercostal spaces to be injected. These points over the ribs are 4 cm. from the line drawn up and down the middle of the back. A 2-per-cent novocain solution is then used in a hypodermic syringe to form wheals over the injection sites. Through these wheals an 8-cm. needle is inserted perpendicular to the posterior surface of the rib. When the point touches the rib, the needle is slightly withdrawn and so directed that it points 45 degrees inward, downward, and forward. The needle is further inserted for a distance of 2 cm. from the lower edge of the rib.

At this time a water manometer is attached to the needle to make certain that it has not penetrated the pleural cavity. Three to five c.c. of the novocain are then injected, and about 5 minutes allowed to elapse, when 3 c.c. of a warmed 80-per-cent alcohol solution are also injected. Half of the alcoholic solution is injected without moving the needle, while the remaining half is injected while the needle is moved slightly with a to-and-fro movement. The alcohol thus injected is supposed to produce a wallerian degeneration of the intercostal nerve and its ganglion cells.

It is only fair to say that this paravertebral-block method is also in an experimental stage, and time will determine its value. Certainly this case seems to justify its use.

DISCUSSION

QUESTION: Was the effect in this case psychic or not?

DR. SCHNABEL: I cannot say definitely. I should think not, in view of the fact that the patient insists that his relief is only unilateral. The possibility of a psychic effect must be borne in mind in cases of angina pectoris. It is said that some patients experience relief of pain by the mere act of lighting a cigarette and taking one or two puffs.

A NERVOUS INFLUENCE AS THE CAUSE FOR A DISTURBED FUNCTION OF THE THYROID GLAND

BURGESS GORDON, M.D.
JEFFERSON HOSPITAL

An Italian girl aged 16 was first observed in May, 1926. She was referred by her school teachers because of nervousness and inability to apply herself to her studies. The family history was irrelevant, and the past history uneventful except for a swelling of the neck which had been present since about January, 1924. She complained of pressure sensations in the throat, insomnia, palpitation, and loss of weight, occurring during the past two months.

Physical examination showed an undernourished girl, alert and obviously nervous. She had moderate exophthalmos, a fine tremor of the fingers, and a smooth bilateral enlargement of the thyroid gland. A bruit was present. The heart action was regular, with a rate of 110, and the sounds were normal except for a snapping first sound at the apex. The metabolic rate was plus 32. The patient returned for further study two weeks later, when the findings were essentially unchanged except for an increased tremor, a pulse of 120, and a metabolism of plus 36. She was advised to leave school and follow a régime of rest periods at home, with moderate exercise and an increased well-balanced diet.

Reëxamination on July 9th showed striking improvement. The thyroid gland had decreased in size, the tremor and bruit were lessened, and the heart rate was 96. She was advised to spend the summer in camp.

At the time of the fourth examination on October 2d, she appeared somewhat dull—in marked contrast to her appearance in May. The size of the thyroid gland appeared to be within normal limits, the tremor and exophthalmos had disappeared, and there was a gain of seven pounds in weight. The metabolic rate was minus 28. On October 6th she was advised to return to school.

A few minutes after her last visit she entered a department store, where she was arrested for shoplifting. She was lodged in the detention wing of the Juvenile Court, and had several cross examinations and two court hearings. Her composure and indifference were remarkable, and she gained two pounds in weight.

There is an interesting side light in the events which terminated in her arrest. The girl was so frequently noticed in the store during April, May, and June, that a detective was delegated to obtain information about her purposes. Her demeanor was quite extraordinary, and this attracted attention. On some occasions she appeared extremely nervous and in a state of panic, and often hurried from one department to another. It was not until September, however, that her real interest in the store was appreciated. About two weeks before her arrest she appeared far less disturbed than during the summer time, and removed several articles with greatest ease.

The course of events and the findings at physical examination raise a number of pertinent questions. Was a thyroid disturbance responsible for her activities, or, on the contrary, was hyperthyroidism the result of her experiences? Was the prolonged excitement the cause of the final exhaustion of the thyroid gland? These questions must remain unanswered because sufficient evidence is not at hand to establish the presence of hyperthyroidism at the beginning of her exploits. However, it is interesting to note that certain symptoms appeared when she was first observed as an excited visitor at the store. At about this time her metabolism increased in rate. Later, when her visits were less hurried and she was composed and most successful, her physical examination showed a decreased activity of the thyroid gland. Obvi-

ously, she failed to carry out the essentials of the medical treatment prescribed.

McCrae,[1] Hewlett,[2] DaCosta,[3] and others suggest anxiety, fright, and worry as factors in hyperthyroidism. Such influences are not always appreciated in considering the management of this curious disturbance. During the present enthusiasm for iodin therapy and surgery, and, to a less extent, roentgenotherapy, this history emphasizes the importance of a conservative attitude in treatment and a critical interpretation of the effect of therapy.

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A CASE OF ACUTE NEPHRITIS, WITH EMPHASIS ON TREATMENT

DAVID L. FARLEY, M.D. AND J. P. DIXON, M.D.
PENNSYLVANIA HOSPITAL

J. Z., laborer aged 29, was admitted to the Pennsylvania Hospital August 8, 1926, on the service of Dr. George W. Norris, complaining of suppression of urine, weakness, nausea and vomiting, and heat exhaustion.

His past history was negative except that for a year he had had many attacks of vague abdominal discomfort and a feeling of heaviness in the epigastrium. He was a habitual user of alcohol, and five days before admission he had indulged rather freely in "moonshine." The following day he was overcome by the heat while working near a hot furnace on an intensely hot day. Extreme weakness and persistent vomiting were accompanied by anuria for the first two days, after which only small amounts of urine were passed.

On physical examination, the patient was found to be well nourished and well developed. He was semistuporous; blood pressure was 135/90; there was no edema; and only slight convulsive movements were noted. Six hours after catheterization on admission, he voided a small amount of pus, in which no organisms were found.

Blood chemistry: August 7th—creatinin 14.6, urea nitrogen 188, plasma chlorid 395; August 9th—creatinin 4.0, urea nitrogen 114.5, uric acid 7.5; August 10th—creatinin 2.5, urea nitrogen 56.0; August 11th—creatinin 1.5, urea nitrogen 22.4; August 17th—creatinin 1.4, urea nitrogen 9.1, uric acid 3.0; October 13th—creatinin 1.0, urea nitrogen 16.0.

Urinalysis: August 6th (catheter specimen—reaction acid, specific gravity 1.020, light cloud of albumin, no sugar, many light and coarse granular casts, many red and white blood cells; August 18th and October 13th—negative.

The phenolsulphonephthalein test (intravenous) on August 14th showed 35 per cent the first hour and 15 per cent the second hour. Under cystoscopy on August 17th, the right kidney excreted 22 per cent the first 15 minutes following the initial 5 minutes, and the left kidney, 20 per cent. A pure culture of an organism of the colon-bacillus group was secured from each kidney, but the organisms were more numerous on the right.

The Wassermann test was negative.

The treatment consisted of colonic irrigations, venesection, and purging. Fluids were forced to the limit of his capacity, and were given by enteroclysis until they could be taken by mouth.

The condition gradually improved, and drowsiness, nausea, and vomiting ceased. The patient voided over 20,000 c.c. in four days.

Three possible etiologic factors suggest themselves: (1) poisoning, with a temporary shutdown of the kidneys, perhaps a reflex anuria, and possibly alteration of the blood chemistry due to the toxin in the blood; (2) alteration in metabolism due to heat exhaustion; or (3) bacterial infection with temporary blocking of one or both kidneys.

It is generally held that creatinin retention indicates permanent kidney damage. Myers and Killian state that creatinin of the blood is appreciably increased only after considerable retention of urea has taken place and the nephritis is rather far advanced, and that in cases in which creatinin rises above 5 mg. improvement is rarely shown and patients almost invariably die within a comparatively short time, the only exceptions being cases in which retention is due to some acute renal condition. In their series of 85 cases with creatinin above 5 mg., there were only 2 recoveries, both in acute cases. Rabinowitch has reported 14 cases with creatinin above 5 mg., all dying in from 1 to 120 days. Rowntree, in a large series of cases, has reported only one recovery—in a man who had had a prostatectomy performed. Creatinin rose to 10 mg., and on discharge was 6 mg. Myers reports a similar recovery. McCarty, Killian, and Chase report a case of nephrolithiasis with reflex anuria in which creatinin rose to 23, with eventual recovery.

High creatinin and urea-nitrogen retention do not always mean a hopeless prognosis, and the possibility of a response to vigorous treatment in acute cases should be considered.

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JANUARY, 1927

Editorials

THE NEW YEAR

Another year has passed, and another milestone added to the aisle of time.

What of the New Year, and the customary resolutions? But why wait until a new year to make resolutions? They should be made when the occasion arises, irrespectively.

What the coming year may have in store for you none can foresee, but the JOURNAL sincerely hopes it may bring you happiness and prosperity—happiness in the continued performance of the altruism of your profession in serving humanity, and prosperity in that you will be suitably rewarded for your services. It is well known that the physician gives his time and sacrifices personal convenience to meet the urgent call for his services as does no other, and to him the consciousness of duty well done too often is his only recompense.

Naturally we ask the question, what can we do this year to enhance the value of our State Society, and its component county medical societies? (1) We should pay our dues promptly, making it a practice to do so early in January of each year. (2) We should make every endeavor to have all the eligible nonmember physicians in our respective counties apply for membership. (3) We must continue our efforts in preventive medicine. (4) We must realize that, potentially, every physician is a health officer. (5) There must be activity in periodic health examinations, as many of our members do not fully appreciate their import. The vital necessity for the periodic health examination of children of the preschool age constantly must be borne in mind. (6) There should be more interest shown in the plans of postgraduate teaching. (7) The county societies must be on tiptoes to keep up an encouraging attendance at their meetings. (8) We must be most careful to avoid any statement or gesture that may cause a suit for malpractice to be brought against a brother physician. One of the Councilors reported at the December meeting of the Board of Trustees that one of our members in his councilor district had requested medical defense in a suit that had been brought for malpractice, claiming incompetency in the treatment of a fracture of the leg. The Councilor stated it is alleged that three physicians in the community had criticized the treatment of the patient. Hence the suit. Who knows but tomorrow any one of the three may be knocking at our door for medical defense. (9) That which will be accomplished in our state and county societies will depend in a large measure upon the active interest manifested by the elected and appointed officers. Their duty and privilege is to fulfill the obligations of their offices to the membership which they represent, but the membership, too, must do its part. There should be coöperation to the fullest extent.

BUSINESS PHILOSOPHY

William Feather states that "one of the greatest business geniuses of this country has always made a rule of asking himself regarding everything he sees, hears, or reads 'How can I use that?' and further, 'How I can use that?' is a query that should be in the minds of all of us as we go about from day to day. Experience is of no value unless we translate it into life itself." How many of our members read through the JOURNAL from cover to cover, and make practical application in their everyday work of the many lessons therein learned.

We have asked a number of our readers to what extent they read the JOURNAL. The answers may be summarized as follows: They thumb the JOURNAL through and read the editorials or the news items or the ads., and too

frequently there it ends; whereas a wealth of material is delivered at their doors regularly every month, if they would but take advantage of it. It is a duty they owe primarily to their patients and secondarily to themselves.

Establish the habit. Read your State JOURNAL. Read it through, and apply in your daily work what you learn therefrom.

ANNUAL CONFERENCE OF SECRETARIES OF COMPONENT STATE MEDICAL SOCIETIES

The conference was held at the headquarters of the American Medical Association, Chicago, Ill., November 19 and 20. The secretaries of the component state medical societies and the editors of the state medical journals were the guests of the Trustees of the A. M. A., and the guests are more than deeply grateful for the hospitality extended by the Trustees.

These conferences do much to further the interest of organized medicine. A report of this conference will be found in this number of the JOURNAL. It contains many valuable suggestions to officers of the State and County Medical Societies, as well as to the individual members, and it is the individual member who must be properly advised.

WHY REGISTER BIRTHS?

On December 9, Dr. Charles H. Miner, Secretary of Health of Pennsylvania, sent a letter to the physicians of the State in regard to the necessity for the registration of births. The following is a portion of the letter:

> The infant mortality rate, which is the number of deaths of infants under one year of age per one thousand living births, is too high in Pennsylvania. We have reason to believe, as the result of an inquiry which showed great incompleteness of birth reporting in several communities, that our high rate is apparent rather than real, and that it can be materially reduced if every birth is promptly reported. We need not comment upon the importance of birth registration from the statistical standpoint or more than mention that a good infant mortality rate is a complimentary index to community progress and intelligence. The value of birth registration to the individual is, however, frequently overlooked. The Department is now carefully checking birth registration throughout the State. It is hoped you will agree with us that complete birth registration is of paramount importance, and, if doing obstetrical work, that you will go over your records to see that you have reported all births which have occurred in your practice and that you will report, within ten days of their occurrence, all future births attended by you.

The State Department of Health has been most lenient and considerate of physicians who have failed to make birth registrations. The law is very specific in this regard, and we should obey it implicitly. This appeal from Secretary Miner should be sufficient, with the courtesies he has shown in the past, to induce every physician in the State to do his full duty in the registration of births.

The following may be mentioned as some of the reasons why every birth should be reported: As evidence to prove the age and legitimacy of heirs; as proof of age to determine the validity of a contract entered into by an alleged minor; as evidence to establish the right of admission to the professions and to many public offices; as evidence of legal age to marry; as evidence to determine the liability of parents for the debts of a minor; as evidence in the administration of estates, the settlement of insurance, and pensions; as evidence to prove the irresponsibility of children under a certain age for crime and misdemeanors, and various other matters in the criminal code; as evidence in the enforcement of laws relating to education and to child labor; as evidence to determine the relations of guardians and wards; as proof of citizenship to obtain a passport; and as evidence in the claim for exemption from or the right to jury and milita service.

THE NEED OF NEUROPSYCHIATRISTS

While it cannot be denied that many think medicine is overspecialized, it must be granted that neuropsychiatry, although classed as a specialty, involves in its practice more principles of the art and science of medicine than any other of the specialties. To study a diseased body free from mental complications is comparatively easy in comparison to the task of studying a diseased condition complicated by these factors. Yet how many physical disorders are totally free from mental reactions? It remains for the neuropsychiatrist to interpret these reactions from the standpoint of cause, effect, and cure.

Whether or not this exaction made on the novice is responsible, or whether the objection to following the specialty is purely personal, environmental, monetary, or due to a lack of enlightenment, is not known. Possibly more than one factor sponsors the objection. As a result, there are many openings for the well-trained neuropsychiatrist in the field today—a field in which the individual may follow psychiatry *per se,* in practice or in institutions, in community organizations, such as health officer, court officer, medicolegal expert, educator, or administrator, or devote himself purely to the scientific side of physiopathology and physiochemistry.

No doubt there are greater and more fundamental reasons. It is only within recent years

that psychiatry has been established in our medical schools, although Dr. Charles K. Mills forty years ago pleaded for such a course of instruction. Second, our State Board of Medical Education and Licensure makes no requirements of the candidate so far as psychiatry is concerned. Third, the great mental hospitals with all their clinical material have never been completely utilized by our colleges for case studies or intern training; neither has the State Board insisted on this training. Yet all of this despite the facts that one out of every ten school children needs neuropsychiatry, 31 per cent of our criminals need neuropsychiatry rather than penal care, and billions of dollars are spent annually for caring for wrecked mental and nervous cases, aside from the untold suffering and sorrow from this cause.

Possibly a knowledge of these facts will tend to ameliorate the conditions. Of course one hears the objection to intern training. The answer to this objection is, regardless of which field the physician may elect, subsequently his psychiatric training will never be amiss, for as one authority has said, the best type of medicine practiced today is that practiced by the man who is able to view his patient from the neuropsychiatric angle.

These positions should be filled. They are not only remunerative, averaging more annually than the 3,000-dollar average established by Mayo for physicians as a whole, but give to the individual a greater public contact with less physical strain and hardship and more hours for scientific study and research than any other branch of medicine. Aside from these, there is no greater challenge for real red-blooded men today than that of neuropsychiatry; there is no greater appeal for scientific service than that demanded by the mentally sick; and surely there is no greater "human touch that counts" like that first touch made with a mind diseased.

THE DEAFENED SCHOOL CHILD

In the December 4th number of the *Journal of the American Medical Association* are two articles dealing with deafened school children that should cause us to pause and give heed to the message they contain. Recent surveys of the condition of the hearing of school children in the United States indicate that more than three million have hearing defects.

The methods of testing the children are detailed. It is recommended "that lip reading be provided in each school during school hours for the deafened child which should be taught by teachers trained to impart this knowledge." For those having a marked loss of hearing, special schools for the deaf should be provided.

If "by far the most important factor in the prevention of deafness lies in the early detection and removal of all possible causes that are productive of ear disease leading to hearing loss," it would seem to us that a great deal more would be accomplished in the periodic health examination service to the child of preschool age. This service is one of the greatest steps in preventive medicine, and general practitioners should be keenly alert to the necessity for this routine, and advocate it at every opportunity. It is one of the many responsibilities that we must assume and carry through. While we are wont to advise what should be done with children in school attendance, we must realize we are not doing our full duty to children unless we detect their abnormalities and defects during the preschool age and give the proper advice for the alleviation or cure of the same.

OPTIMUM WEIGHT AND ITS RELATION TO HEALTH

It was thought some years ago, after the average age-height-weight table had been worked out, that the last word had been said on the question. Insurance companies then discovered that for the later years of life the table was too high, that adults who were under were prone to live longer and enjoy better health than those who were over, provided they were not too much under. But the importance of those words "too much" cannot be overestimated.

The danger of overweight has been so much emphasized, resulting in reckless dieting and malnutrition, especially among adolescent girls, with whom it is a fad to be slender, that the question of optimum weight has become almost a matter of public health, and a committee composed of some of the most eminent scientists and dietitians in the country has been formed under the auspices of the American Medical Association to study the matter and prepare corrected age-height-weight tables.

The subject is more complicated than would appear on the surface, and will probably require years of careful investigation to evaluate accurately all the factors which must be taken into consideration. As has been shown, while the average weight increases with age, the average is much too high for the best results, and less increase should be allowed as the subject grows older. More important factors are the relation of the height to the weight, but the general build, whether stocky or slender, large-

boned or of more delicate framework, must enter largely into the final calculation. The race, too, is significant, as this has a bearing on the bodily habit of the individual, while the ancestry has a determining effect on the tendency toward obesity, as has also the activity of the endocrine glands.

The proper relation of weight to nutrition is of great importance in the treatment of many more diseases than is generally realized. Malnutrition may superinduce to rickets, scurvy, pellagra, tuberculosis, and other deficiency diseases, while cancer is said to be a disease of the well nourished. In the treatment of diabetes, the dosage of insulin and the amount of food allowed must be regulated according to the nutritive needs of the patient, and a satisfactory age-height-weight table is almost imperative for the handling of this disease on a scientific basis. Treatment of nephritis and other cardiorenal-vascular conditions is largely dietary, following elimination of focal infections, and here, again, the optimum weight of the patient must receive due consideration. Another important factor influencing weight is reduced excretion of salt and water by the kidney, and in such cases intake of these substances, rather than food, must be reduced.

It is agreed that both undernutrition and overnutrition are productive of ill effects, so that the study of the normal has assumed an importance scarcely yet realized as generally as it should be. The optimum, well-balanced diet is a necessity in prevention of deficiency diseases during youth and disorders of metabolism during the later years. This is a fertile field of study, and propaganda to the laity should invariably present both sides of the question.

Reducing without proper standards by which to gauge progress is dangerous business. It has been determined that certain proportions of carbohydrate foods are necessary to induce oxidation of the fats in the tissues, so that simple instruction to eliminate starches and sugars from the diet is not sufficient. An effort must be made to provide the necessary protein to rebuild waste muscle tissue, and sufficient carbohydrates to supply the necessary energy, while withholding fat in order to force the body to burn up its own surplus. Vitamin-bearing foods must not be reduced, and proper balance must be preserved at all times. Otherwise, weakness and ill health are very apt to supervene and thus effectually put an end to further dieting.

It is not generally realized that overweight is frequently associated with overwork of the mind. The sedentary worker will often be found to be overeating in an effort to produce strength for more work than he should be doing. It may, then, be unwise to advise physical exercise without decreasing the amount of mental work done. We so often fail to realize that this type of labor requires the expenditure of a tremendous amount of energy, and that to add to the already too great expenditure the strain of physical exertion may be courting a nervous breakdown. Frequently, in order to reduce without disastrous consequences, the mental worker may require rest rather than exercise to restore his depleted store of energy and increase his metabolism.

In such cases, deep breathing (which may be done when recumbent) in the open air is very helpful in increasing oxidation. Sun baths, or if they cannot be had because of weather conditions, electric-light baths, are also of the greatest value in stimulating the metabolism, and often are alone sufficient to effect some reduction in weight. Where indicated, glandular therapy may also be effective.

Nutrition and its associated subject of normal weight and how to attain it is one of the livest questions of the day. Only its borders have been explored scientifically so far, and the general practitioner should realize that he can make an important contribution to the knowledge of the subject. His observations on weight and nutrition phenomena as they manifest themselves in his daily practice may be of inestimable value in testing out the conclusions of laboratory and research workers, and cases showing unusual aspects should invariably be reported.

DANCING AND HEALTH

Much publicity has appeared in the lay press in regard to the deleterious effects of dancing, especially the very strenuous Charleston. Any exercise carried to extremes will be very apt to prove injurious rather than helpful.

Dancing undoubtedly is good for one's health, but must not be overdone. The physician very frequently is asked the question, "Is dancing harmful?" As this diversion is increasing in popularity, he must be prepared to give a decision in the individual case. Undoubtedly, in moderation and under proper conditions, dancing should promote good health. It causes deep breathing, facilitates the circulation of the blood, and stimulates hepatic function. On the other hand, excessive dancing must prove harmful to certain people, especially when done under bad conditions. Dancing indulged in till the wee sma' hours of the morning has its untoward results, and is not to be encouraged, certainly not oftener than once a week, and more prolonged intervals might be preferable.

Dancing surely is an enjoyment made for good health. The harm done may be due to bad ventilation, the use of alcohol, excessive smoking, and late hours.

In women with pelvic disease, it may be necessary to limit or interdict dancing, also to prohibit it in some women during menstruation, on account of increasing the flow, or on account of the pelvic distress it may induce.

THE UPWARD TREND OF CANCER MORTALITY

Under this title the Metropolitan Life Insurance Company calls attention to a very important survey based upon a detailed study of the mortality from cancer among its industrial policy holders. In 1925 the company published its report covering the period from 1911 to 1922 inclusive. The *Statistical Bulletin* of the company for November, 1926, includes the detailed study of cancer mortality for the years 1923 to 1925.

The result of the analysis is as follows: There has been an unquestioned upward trend in the total mortality for cancer. The annual increases are 1.13 per cent at ages 45 and over, 0.94 per cent at ages 25 and over, and 0.93 at ages one and over. As to color and sex, the greatest increase was among the white males, then the colored males, then the colored females. With only a few exceptions, the rate for cancer of different organs, considered separately, shows each by itself an upward trend, with the exception of the skin and buccal cavity, which show a downward tendency.

GALL-BLADDER ADHESIONS

In 1905, in a paper on "Gall Spider Cases," Dr. Robert T. Morris stated as follows: "There are cobwebs in the attic of the abdomen. There are hieroglyphics on the peritoneum of Darkest Abdomen, and physicians are to read them during the next decade with as great avidity as they read the hieroglyphics of appendicitis, once the key characters had been discovered."

Two decades now have passed, and there are many practitioners who are still treating many of their patients for indigestion, torpid liver, nervous dyspepsia, ulcer of the stomach, etc., etc., not realizing or appreciating that the gall bladder is very frequently the etiologic factor, and that the treatment is surgical and not medical. It is surprising to hear some physicians say how few of their patients require surgical attention. The surprise is that the physician has not made the proper study of his patient and recognized the need for surgical intervention. Possibly this applies more frequently to gall-bladder disease than any other, for the practitioner is too prone to overlook the real pathology, and ascribe the upper-abdominal symptomatology to improper function or disease of the stomach.

NOSTRUMS AGAIN

Neither the degradation of true therapeutics by the blameworthy manufacture of secret medicine, nor the sorry vogue of those whose interest in a patient and his disease ends in diagnosis, with little or no care for treatment, can prevent the maintaining of drug treatment on a scientific basis. The road is staked out, the profession should follow the reputable and scientific path, and all that remains to be done is for the physician to keep his eyes open to the facts and be guided thereby.

The good work that is being continued by the Council on Pharmacy and Chemistry of the American Medical Association is most commendable. No advertisements of remedies are accepted by this JOURNAL unless the remedies have been approved by the Council. Being assured of this, our members should read the advertising pages, in order that they may be advised of the legitimate products our advertisers desire to bring to their immediate attention, to the end that better support will be given to them.

JOTS AND TITTLES

Recent Discoveries

A NEW SUBSTANCE which has been named "narcosan" apparently is potent in restoring to normal the body cells damaged by chronic indulgence in narcotic drugs. It has been administered over a period of six months to several hundred inmates of penal institutions, and good results have been reported in releasing the victims of drug addiction from the pathologic craving which occurs in this condition. The results achieved in these tests are reported to have the marks of permanency.

A REPORT comes from Geneva, Switzerland, that Dr. Henry Spahlinger has succeeded in immunizing cattle to tuberculosis, on the same principle as humans are vaccinated against smallpox, by means of "partial or incomplete vaccines."

THE DISCOVERY that canine distemper (which is thought to be closely allied to human influenza) is due to an ultramicroscopic virus is announced by the British Medical Research Council. The investigators include Dr. William E. Gye and J. E. Barnard, who are studying this problem as well as cancer. The Council has also expressed gratitude to the American Distemper Council for its aid, and announces the expectation of evolving a method of immunization.

Drug Regulations

MANUFACTURERS OF BIOLOGICALS have inaugurated a campaign to induce all retail dealers to dispose of these products within the potency date stamped on the container, and to refuse to sell those which have passed this date. Federal regulations require the fixing of a potency date, and while biological preparations are sometimes effective after its expiration, many times they are more or less inert. Users of these products should be careful not to accept outdated supplies.

The contact committees of the American Drug Manufacturers' Association and the American Pharmaceutical Manufacturers' Association have submitted recommendations on the degree of accuracy for several hypodermic tablets not included in their former report on this subject, according to a recent statement issued by the Bureau of Chemistry, United States Department of Agriculture, which is charged with the enforcement of the Federal Food and Drugs Act. Because of the importance of such tablets and the emergency conditions under which they are often used, both manufacturers and officials feel that the tablets should be made with the greatest accuracy possible. The recommendations specify the maximum and minimum limits for the active ingredients of the various tablets, and give methods for assay to determine the degree of accuracy. Recommendations apply to the following hypodermic tablets: Codein phosphate, pilocarpin hydrochlorid, caffein and sodium benzoate, caffein, apomorphin hydrochlorid, hyoscin hydrobromid, procain, morphin and atropin, physostigmin sulphate, physostigmin salicylate, corrosive sublimate, and arecolin hydrobromid. Former recommendations on atropin sulphate hypodermic tablets have been withdrawn for further study, and a method suggested for the analysis of cocain hydrochlorid tablets as a substitute for that previously proposed. Copies of these recommendations may be obtained upon application to the Bureau of Chemistry, United State Department of Agriculture, Washington, D. C.

Official Reports from the A. M. A.

Physiotherapy is a very important subject. Every physician must realize its importance, and keep abreast of its advances. In the December 11, 1926, number of the *Journal A. M. A.* (page 1999) will be found the official rules of the Council on Physical Therapy of the American Medical Association, for the consideration of devices for physical therapy. These rules "have been adopted primarily with a view to protecting the medical profession and the public against fraud, undesirable secrecy, and objectionable advertising in connection with the manufacture and sale of apparatus and methods for physiotherapy." The devices and methods approved by the Council will be published in the *Journal A. M. A.* from time to time the same as is the custom followed in publishing the activities of the Council on Pharmacy and Chemistry.

The report of the Committee on Oto-Rhinologic Hygiene of Swimming will be found on page 1998 of the December 11, 1926, number of the *Journal A. M. A.* This report is of intense interest to all who have to do with swimming pools.

Child Welfare

"The Nation's infant mortality rate," according to Miss Grace Abbott, chief of the Children's Bureau of the United States Department of Labor, who recently presented her annual report, "was 72 per 1,000 live births. This means an estimated total of 180,000 infants dying during their first year of life in the country as a whole." The five leading states of the country were Nebraska, Iowa, Minnesota, Washington, and Oregon, whose rates were 60 or less.

It is reported by the *Journal of the American Institute of Architects* that schoolroom windows of glass which permits the passage of the ultraviolet rays of the sun are responsible for "taller and fatter" English schoolboys. Eventually all schools will be equipped with this type of windows, and there is no doubt that their wider use would result in improvement of health in general. They are, in fact, more important than good ventilation.

More vital than the question of the teaching of evolution in our schools is the influence teachers can have on their pupils' ideas of health preservation. According to the *Indiana State Medical Journal,* certain teachers are known to have discouraged vaccination and diphtheria immunization. It is an important part of the physician's duty to see that school teachers, more than any other part of the population, receive a proper understanding of the established facts of medical science.

Color Therapy

Considerable publicity has recently been given to the subject of color therapy. While one's first reaction is to dismiss it as the nonsensical idea of fanatics, yet the evidence is piling up that different colors have vastly dissimilar effects on the living organism. Not only is this evident from clinical results in treatment of psychopathic cases, but also from laboratory experiments. Franz Nagelschmidt, M.D., of Berlin, writing in the *Medical Journal and Record* on the biologic action of light, cites some interesting facts. For instance: blue and violet rays excite a bright phosphorescence on a screen of zinc sulphite which persists in the dark for hours. If half of such a screen is then covered with a metal plate, and the other half irradiated by a red lamp, the phosphorescence is instantaneously extinguished, while the covered half still shines brightly. This effect, he says, is more definite if ultraviolet is used as an excitant and infrared as an extinguisher. He states, furthermore, that wave lengths of 7200, 6500, 5500, and 5000 A increase the growth of sarcoma; while 6700, 6000, 5250, and 4700 A decrease it. Yet 6500 A, which increases sarcoma, decreases carcinoma. He also makes the first statement that has come to our attention to the effect that "If you expose a series of mice with tendency to spontaneous tumors to sunlight, the percentage of mice tumors will increase; in the dark it will decrease." It seems reasonable to suppose that if such effects as these can be secured, the different wave lengths of the visible spectrum may very well have a powerful psychologic effect, especially in pathologic conditions, for, according to Nagelschmidt, "visible light is differently absorbed by normal serum and pathological serum, and the same is true for ultraviolet rays." The subject seems well worthy of further study.

More About Postmortems

A. P. Burton, of Erie, Pa., representative of the Morticians' Association, writes to the Chairman of our Committee to Confer with Morticians: "Here is a continuation of the splendid work you started in Pennsylvania and which I broadcasted to practically every state association of funeral directors in the United States, and you may be interested in this excellent work." The clipping he inclosed was taken from the *Funeral Director* for October, 1926, and is quoted here in full because of its considerable interest to the medical profession:

POSTMORTEMS AND THE FUNERAL DIRECTOR

Physicians and hospital officials have, from time to time, leveled criticism at funeral directors, alleging that they often oppose postmortems and thus stand in the way of medical progress.

Only a few months ago a physician from the health department of Madison, Wis., in addressing the funeral directors of that state, cited an instance where a woman had been operated upon for gall stones. Apparently the operation had been a success, and the woman was about ready to leave the hospital when, for no apparent reason at all, she died.

The physician requested that the family permit a postmortem in order to ascertain the cause of the death. They promptly acquiesced. However, according to the Madison health officer, the funeral director in charge of the case asked the family not to permit this since, he stated, it would not be then possible for him to preserve the body in its natural appearance. In consequence, no postmortem was held.

"Now you are blocking progress when you take that attitude," the physician told the Wisconsin funeral directors. "You ought to know how to take care of every posted case. You ought to be willing to put yourself out a little to do that extra amount of embalming or service or whatever is required in the interest of science, if that will aid in discovering the cause of death. Perhaps in this instance the family will go through life feeling that possibly a sponge was sewed up in this woman and that caused the death, and the doctor will feel that he perhaps made some little slip and perhaps the postmortem would have revealed the difficulty."

This health officer is correct in many respects, and we are sure that no right-thinking funeral director would willingly stand in the way of medical progress.

But has it ever occurred to physicians and hospital officials, that they themselves stand in the way of the holding of postmortems, due to the careless manner in which bodies are frequently handled in such cases?

Elsewhere in this issue we are publishing the text of an address made by a Boston funeral director at a meeting of the New England Hospital Association wherein he pointed out the fact that all too often hospital physicians and nurses, when postmortems are held, handle the bodies so carelessly that the funeral director finds it practically impossible to restore to them a natural appearance.

He mentioned one instance where, after having been delayed greatly through failure of the hospital to perform the postmortem at the time promised, his embalmer found, upon receiving it, that the body was in a very bad condition. We quote him, in part, as follows:

"My embalmer was very much upset and had his tape out to show me that the incision was over an inch above the collarbone, and that the arteries of the neck had been cut off so high up he could not use them; and there were the ears and neck badly discolored; and besides all this the hair was in such condition that it must be washed—and the family due within an hour expecting to see the body in the casket!"

He brought out many other instances, too, showing either lack of knowledge or plain carelessness on the part of the hospitals.

Certainly no ethical funeral director would want to do anything that is contrary to the interest of medical science. But his own reputation requires that he prepare the body so that it will look natural. He must consider the members of the family, too, whose grief is certain to be greatly increased by the sight of their departed loved one with unsightly gashes and discolorations which the most expert embalmer could not possibly conceal!

It is pleasing to note that the New England Hospital Association, upon hearing the funeral directors' complaint, recommended a proper and more considerate method of handling bodies in postmortem cases.

It might be well if this matter were brought to the attention of hospital officials and organizations all over the country. We feel sure that if the proper coöperation is shown by hospitals, the funeral directors will reciprocate.

PUBLIC HEALTH

Special Courses for Physicians in Treatment of Venereal Disease.—Surgeon General Hugh S. Cumming has announced that the U. S. Public Health Service, as a part of its coöperative work with state health departments in the control of venereal diseases, will give special courses of training to physicians, clinicians, and health officers at its venereal-disease clinic, Hot Springs, Arkansas. This clinic, which is operated by the Public Health Service in a new building belonging to the Department of Interior, offers exceptional opportunities for the study of the venereal diseases, especially in clinical and laboratory diagnosis, treatment methods, and clinic management. Here, studies of the many practical and scientific problems connected with venereal-disease control are carried on. Last year 3,570 indigent persons were examined at the clinic; 3,064 cases of syphilis and gonorrhea were diagnosed and given a total of 32,315 treatments.

Surgeon General Cumming states that the instruction courses which now are offered will consist of a series of lectures by the director and the consulting specialists attached to the clinic, demonstrations in laboratory and treatment methods, and practical experience in the diagnosis and treatment of syphilis and gonorrhea in various stages through participation in the routine work of the clinic. New classes of not more than ten physicians will be formed on the first of each month, and the course will continue for a minimum of thirty days. Engraved certificates will be presented by the Public Health Service to those who satisfactorily complete the thirty-day course. Fees are not charged for this course of instruction. The individual physician, however, will necessarily provide his own travel expense to and from Hot Springs and his living expenses while there.

Interested physicians should write to the local state health officer or to the Surgeon General, U. S. Public Health Service, Washington, D. C., for information or application blanks. Applications should be endorsed by the state health department in which the applicant resides before being submitted to the U. S. Public Health Service.

The Influenza Epidemic of 1926.—The wave of influenza in the late winter and spring of 1926 in the United States was more than ordinarily severe when compared with the influenza outbreaks which have occurred since 1920. Measured by the excess of mortality over the corresponding period in 1925, which was not an influenza year, the toll of lives exacted by the disease was by no means negligible. In fact, were it not for the overshadowing pandemic of 1918, which caused over 500,000 deaths in the United States alone, and the epidemic of 1920, which caused about 100,000 deaths in this country, the 1926 outbreak would have been regarded as a calamity.

Although the severity of the 1926 outbreak, as measured by the mortality rate, was small in comparison with the severity of the 1918 epidemic, or compared with that of the 1920 epidemic, the three epidemics were similar in certain broad epidemiologic aspects, and markedly dissimilar in certain other respects: First, there was a similarity from the point of view of duration, all of the waves having begun and ended within a period of three months; second, a similarity in the time required for the epidemics to reach their maximal mortality rates; third, a similarity in the *rate* at which the mortality rose and fell, although the time required for the 1926 epidemic to spread and reach its crest was somewhat longer than for the 1918 and 1920 epidemics. The 1926 outbreak was similar to the epidemics of 1918 and 1920 in another respect; namely, that there was a fairly definite geographic direction in which the wave traveled and spread. But here the spatial similarity ceases. In fact, each of these epidemics had its own particular direction.

It will be recalled that in the autumn of 1918 the epi-

demic first manifested itself in New England, and then spread south and west, first appearing in the larger cities in its course, and later radiating from these cities into the surrounding areas. The 1920 epidemic, on the other hand, appeared first in the north central section and apparently spread to the east, south, and west, in somewhat the same manner as did its greater predecessor. Certain localities appeared as exceptions in either epidemic, but the general directions were fairly clear. The 1926 epidemic, however, seems to have traveled in directions entirely different from those of either of the two predecessors. Apparently the main general direction was from the west and southwest, to the southeast and then north, the New England section being the last affected.

A Suggestion to Practicing Physicians.—The July 24 issue of the *Weekly Bulletin* of the New York City Department of Health contains the following suggestion to physicians: Why not make it a practice to inquire of every patient with children whether they are immunized against diphtheria? Such an inquiry can not be objected to and ought to be interpreted as praiseworthy interest on the part of the physician in the physical welfare and safety of his patients' children. Should the reply be that the children have not been immunized, a very valuable opportunity for doing a most necessary educational work presents itself. It requires only a very few minutes' time to explain to the attentive patient the virtues and values of diphtheria immunization, and this education of the patient by his physician is of the highest value.

HOSPITAL ACTIVITIES

What is Physical Therapy?—Physical therapy is an added tool in the equipment of a modern hospital. It has a distinct place in almost every kind of therapeutic team work, and can be counted upon at all times to reduce the period of hospitalization and convalescence of most patients. It never was a competitor of recognized medicine and surgery, and the sooner this fact is appreciated by the overenthusiasts, the sooner shall we have recognition of physical therapy in the world of modern medicine. Physical therapy is largely symptomatic treatment. It is never a method that can stand alone. It is never independent of recognized medical and surgical procedures. The general public today is not satisfied with just receiving prescriptions or a bottle of unknown medicine and then sitting around to await results. Massage always has had a distinct place in general therapeutics, but doctors in the past, desiring to be more scientific in their appearance and procedures, have neglected such a simple means of treatment, and hence the different cults have sprung up and taken what rightfully belongs to medicine by basing their treatments on massage and variations of it. Had the medical profession retained the right given it to direct and administer all the forms of treatment, the cults would not be making the progress they are today because the patient wants something done and massage at least does something at the time, even though it is not the correct therapeutic procedure.

Now let us look into what physical therapy can do. With the modalities available we are able to produce thermal, chemical, and mechanical reactions in the living body, all governed by the laws of physics and physiology. When the doctors on the staffs of different hospitals understand how really simple and unmysterious 98 per cent of physical therapy is, they can quickly grasp the subject.—*Modern Hospital.*

Physical Therapy Can Be Made a Profitable Department of the Hospital.—The hospital that has a complete physical-therapy department with an able director in charge will gain great prestige in the community because through that department apparently miraculous cures may be effected; while the injured may be assured of a more perfect recovery from conditions which otherwise would permanently decrease the patient's earning capacity. The doctors on the staff will soon learn the value of physical therapy, and, as they learn to avail themselves of the valuable forces placed at their disposition, their work will improve in quality and the hospital will more rapidly become what it should be—the center for the application to the sick of any and all curative methods and resources known to scientific medicine.—*Hospital Management.*

Principles Applying to Laboratory Service in General Hospitals.—Probably throughout the country no two hospitals have met the problem of the organization of their pathological service in the same manner, and it is well that there should be some diversity. At the same time, the broad lines of the problem facing all hospitals in this respect are the same, and certain general rules can be laid down.

In the first place, as to the choice of the pathologist: it is very necessary that he should have had special training for his work, and this special training is best obtained in a junior post in the laboratories of one of the great teaching hospitals. The time has now passed when a practitioner without special training can be regarded as an eligible candidate for the post of pathologist in any general hospital.

The main laboratory should be large and well lighted. The floor, if possible, should be of cement with a covering of cork linoleum; if of wood, it should be kept well polished. A north light for microscopic purposes is very desirable. South is the most undesirable aspect of all, and should be avoided if at all possible. Cupboards cannot be too plentiful. Gas, electricity, and water should be available in lavish abundance, and nowhere should the pipes or wires conveying these be sunk in the walls. The plumbing, including all the drains from the sinks, should be as open as possible. The preparation room should contain a large sink with hot and cold water and as lavish a supply of gas and electricity as the main laboratory.

It is advisable that the postmortem room should be as near to the laboratory as possible, but it is not nearly so important that it should be near the laboratory as that the latter should be within easy reach of the wards, and in most cases, if the laboratory is to be within easy reach of the wards, it will be impossible to find a place for the postmortem room near it. The building near which the postmortem room must obviously be situated, and with which it should share the same roof, is the mortuary.

The last, but by no means the least, important of the accessories of the pathological department is the animal house. Where the laboratory is under the same roof as the wards it will obviously be impossible to have the animal house very near, but it is essential that it be as near as possible; otherwise much time is lost fetching and taking animals, and the assistant is further liable to spend rather too much of his time in the company of the guinea pigs.

Coöperation between the resident staff and the pathologist is even more essential for the efficient working of the department and the hospital of which it forms a part, and by dint of a certain amount of bullying is not impossible of attainment. No system can make up

for lack of a desire on the part of the clinical staff to use the laboratory, or lack of knowledge of what the laboratory can do for them. There are two or three cardinal points which must be observed. Special forms must be provided to accompany all specimens or demands for work in the wards sent to the laboratory. A second form, preferably of a distinctive color, must be provided for the laboratory report, and the attachment of this to the patient's record sheets as soon as it is received in the ward must be rigorously enforced. Thirdly, a day book must be kept in the laboratory in which copies of all reports sent to the wards are to be entered. So far as the hospital itself is concerned, it is the work done for the wards which must constitute the justification for the existence of the laboratory. The laboratory, however, will be open to the receipt of work from the outside, and this private work should form a source of income to pathologists and laboratory alike. An efficient pathological service is an essential to the economy of a hospital. Pathology is not ancillary to medicine; it is medicine, and a hospital without a pathological service is incapable of proper function.—*Hospital Management.*

Labeling Infants.—The necessity for extreme care in the labeling of infants and checking of names to identify the patients at the moment of delivery of the babies to their mothers was emphasized by the recent exchange of infants in the maternity department of a hospital in New York. Although the error was speedily rectified, the experience of the two mothers might justify the addition of another form of identification to augment the large number already in use.—*Modern Hospital.*

Danger of Intravenous Injections.—The danger of the intravenous administration of a solution of sodium chlorid, which is almost equally harmful to the patient whether in more or less concentrated form than the blood stream, should be strongly impressed upon the minds of nurses, interns, and others in the hospital personnel.—*Modern Hospital.*

Survey of Operating Suite.—It is good institutional practice for a monthly or bimonthly survey of the operative suite to be made by the hospital bacteriologist. Culturing of gauze preparations, instruments, gloves, the hands of surgeons and nurses, dust from window sills, solutions, and other articles in the operative room, usually comprise this study. In this manner postoperative infections can be more certainly traced to their source.—*Modern Hospital.*

Protecting Corridor Walls From Marring.—The problem of preventing corridor walls from being chipped by the impact of stretcher and food carts, which so often results in unsightly marks, has been successfully solved through the use of linoleum by a hospital in the East. The building which is old, had no protecting cove base and the walls were chipped daily. The superintendent, after trying several remedies, resolved to try linoleum. An inferior grade, thirty-six inches wide, was obtained and glued to the wall with liquid cement, the lower edge being placed directly above the baseboard. This solved the problem. The walls are protected, and the walls and corridors present a more pleasing appearance and are easier to keep clean. —*Modern Hospital.*

There is a disease that occurs sporadically among young hospital interns and nurses. It is not known whether it is contagious or infectious. It temporarily destroys the efficiency of the keenest physician or the most capable nurse. It produces loss of memory and a general state of confusion and indirection in performing the day's work. There is no preventive treatment known, and curative effort is not at all satisfactory. The wisest and most experienced hospital and training-school executives often stand aghast at the virulence and destructiveness of this institutional pestilence. The disease is variously denominated as liebeskrankheit, mal d'amour, or in everyday English, lovesickness.—*Modern Hospital.*

To the sick, food should be something more than physical nourishment, something that is beyond a mere melange of carbohydrates, proteins, and fats. It should transcend calories, vitamins, and roughage, and should become to the body what a poem is to the ear, satisfying but not satiating, stimulating rather than stupefying, a fillip to the imagination, a gentle surprise but not a rude shock. Plain wholesome food may be sustenance, it may stoke the vital furnaces to the end that a given number of ergs may be produced, but in dealing with tissues that are to be brought back to a normal state there must be an admixture of the vitamin of art. Its plainness must be the simplicity of real beauty in order that it may appeal to senses jaded by disease, and it must be as nourishing to the spirit as to the body.—*Modern Hospital.*

There is no arena of human endeavor that more continuously demands decisions than does the hospital field. Situations arise daily which require the exercise of judgment, and human welfare and happiness depend upon the decisions made. Many of these are puzzling in the extreme and demand the greatest force of character. It is a great temptation to straddle the fence, but respect for self and the job prohibits this. In fact, it cannot be done successfully.—*Modern Hospital.*

How Can Economy in the Use of Supplies be Best Taught to the Student Nurse.—The student nurse is not singled out because she is the only one in the hospital who needs instruction in economy. Much money could be saved by the hospital, however, if each nurse were as careful with the supplies that she handles as she would be if they were bought from the purse of her own family. Too many look upon the question of the use of supplies as if the resources of the institution were unbounded, and the stock of gauze, adhesive plaster, and ligatures unlimited. The personal use of the hospital's gauze by nurses is a problem which has disturbed many administrators. A central surgical supply room, to which all gauze and muslin are delivered, and from which sponges, bandages, and other gauze and muslin preparations are issued, is a useful expedient to adopt in preventing the misuse of these articles. The supervision of the supply of ether in the operating and dressing rooms must be strict, if the use of this expensive drug for cleaning purposes is to be prevented.

Perhaps one of the best ways of bringing about economy in the use of supplies on the part of the student nurse is for the directress of nurses to conduct a course of talks in which the cost of equipment and materials is set forth, and in which methods of conservation are discussed. The superintendent of the hospital can accomplish a great deal along this line, if he makes it a point to take an active part in this course. A graphic display of the chief articles used in the daily work of the hospital, which might consist of a roll of gauze and one of adhesive plaster, a tube of catgut, and some of the commoner surgical instruments, for instance, with a card affixed, plainly setting forth each article's cost, ofttimes is so impressive to young physicians and nurses that they gladly coöperate in any economy program.

Indeed, for newly arrived interns and probationary nurses, a trip about the institution during which the cost of supplies is pointed out and the care of equipment and instruments urged, bears fruit in promoting hospital economy.—*Modern Hospital.*

What is the Relation of the Department Head Nurse to the Interns on Duty?—The head nurse is usually the most stable officer in any of the hospital's departments, from the standpoint of length of service, although in institutions where the resident-physician system is in vogue, sometimes a physician has almost as long a tenure of office. In most hospital organizations, however, the head nurse is the person who is responsible for the care of hospital property, and for the administrative supervision of the nursing work done in her department. The young intern in these departments ofttimes must look to the head nurse for much of his information concerning the manner of conducting the day's routine. It is often the experienced head nurse who tactfully informs the young physician of the rules, customs, and procedures in her department. It is a wise intern who accepts this information in the spirit in which it usually is given.

The head nurse, of course, has no authority in regard to the details of any treatment that may be prescribed for the patient. She has no authority in making new rules governing the work of the intern. Nor is it to be denied that she sometimes displays too little tact in passing on to the intern information that she has received from others. But in the last analysis, many successful physicians received their first instruction in doing dressings in the surgical ward, or in performing many other similar duties, from an experienced graduate nurse. Ofttimes this information was tactfully imparted, and the physician did not realize at the moment that he was being directed by the assisting nurse.

However, friction not infrequently arises between an intern and a graduate nurse, because the former resents any attempt on the part of the latter to inform him concerning department rules. When such a situation arises, the superintendent of the hospital and the directress of the nurses must settle the dispute in a way that will avoid, if possible, the injection of personalities into the business of treating the patient. When it comes to the question of the protection of property, and the issuance of supplies for the use of the doctor, the head nurse is usually finally responsible through her directress to the hospital superintendent, and the intern must recognize this fact.—*Modern Hospital.*

Should the Hospital Charge Members of its Visiting Staff for Meals at the Institution?—This question is one for which there appears to be no accepted solution. Some private institutions argue that since the visiting physician derives a major portion of his income from the treatment of patients in the private rooms and wards of the hospital, the physician should pay for his meals. It is also often felt that the treatment of ward patients, for which the physician is not permitted to charge, in a way is balanced by the private-room facilities offered for the treatment of his private patients. The financial status of the hospital is another factor that more or less affects this policy. On the other hand, many hospitals believe that the camaraderie that exists when visiting chiefs and interns gather about a table at lunch and informally discuss their diagnostic and administrative problems recompenses the hospital for the price of food consumed.

There is no doubt that the heightened morale incident to an appreciation on the part of the visiting staff of such generosity on the hospital's part will react favorably in providing better care for the patients. It is usually possible to enact rules covering those eligible for meals in the hospitals, only those chiefs on duty being permitted the privileges of the dining room. Moreover, it would seem that the hospital would secure the advantage of receiving more of the visiting physician's time were he to know that if the meal hour arrived during his visit at the hospital, he would not have to curtail his round-making to secure his lunch before meeting his afternoon engagements. Looking at this matter from every angle, it would appear that while local conditions will no doubt affect the solution of this problem, the hospital, in the long run, will gain by permitting physicians to lunch at the hospital, should attendance on patients cause them to be there at mealtime.—*Modern Hospital.*

Unfinished Histories in the Record Room.—One of the usual subjects of discussion at the meetings of the Hospital Association, American College of Surgeons, and the American Medical Association is the prompt completion of patients' histories. The Presbyterian Hospital in Philadelphia has secured unusually satisfactory results through a weekly inventory of unfinished histories in the record room. Each Saturday morning this list is placed on the superintendent's desk, and a copy is sent by him to each intern and his chief, the chief resident physician, and the president and secretary of the medical staff. This plan has worked so effectively that the week ending October 2d there were only five unfinished histories in the record room, and October 9th there were none. The medical staff secretary, who acts as registrar, and the record room clerks have contributed no small part toward the securing of these results.

Notary in Hospital.—In a recent letter to *Hospital Management* Cornelius S. Loder, Hospital Consultant, New York City, suggests that more hospitals should have a notary public among their personnel because the hospitals and patients frequently need notarial services. Occasionally when outside notaries are called in their charges are high. Mr. Loder points out that the admission clerk, the bookkeeper or assistant or some clerical worker can become a notary by writing to the Secretary of State for an application form and complying with the requirements. "The usual plan," continues Mr. Loder, "is to pay for the State and notary fees, the applicant furnishing the seal and rubber stamp. It is understood that all papers of the hospital itself will be handled by the notary without cost, but that any other work is to be charged for at the customary or stated charges and retained by the notary public."—*Hospital Management.*

The Way to Start a New Department.—"How can we start a physiotherapy department in our hospital?" Substitute "outpatient," "occupational therapy," "children's" or almost any other departmental title for "physiotherapy" and you have a question that is frequently asked by progressive and aggressive administrators and executives. A study of a great many hospitals that have flourishing departments such as these indicates that the best way to start is to start slowly, using no more space than is actually needed in the beginning, and no more equipment. For space and equipment are not the most important tests of the efficiency of any department, and not infrequently are there to be seen hospitals with rooms containing varied equipment, practically unused, because of a too enthusiastic and an overoptimistic start. In the first place, the need of the department should be carefully deter-

mined, and the coöperation of one or two members of the staff enlisted. Then, be prepared for a rather long and sometimes disappointing struggle, for even in the most successful departments of large hospitals today there were small beginnings and heartaches. But a comparatively small room, and two or three pieces of essential equipment, backed by a few interested staff members and a full or part-time technician or other worker, probably has a greater chance for earlier success than a large space and thousands of dollars' worth of apparatus and machinery.—*Hospital Management.*

Ethylene Use Trebled.—"It is interesting to note that the number of ethylene administrations have more than trebled," writes Dr. Myra E. Babcock, chief anesthetist, Grace Hospital, Detroit, Mich., in the annual report of that institution, "while there has been a corresponding decrease in the number of nitrous-oxid anesthesias." According to this report, the anesthetics given during the year were: ether, 3,144, including four colonic administrations; 422 operations with local anesthetics, novocain being most frequently used; 764 nitrous-oxid and oxygen; and 1,241 ethylene —total, 5,571.—*Hospital Management.*

Ethylene Deserves a Trial.—The report of the American Hospital Association committee on clinical and scientific equipment and work opened with a discussion of ethylene-gas anesthesia by Miss Annette B. Cowles, superintendent, Children's Free Hospital, Louisville, Ky. She said that in all cases where explosions had been reported, practices contrary to advice of experts had been followed. She intimated that there was danger of explosion from sparks, but that improvements in machines now prevent static. In conclusion she said that there was no ideal anesthetic developed yet and that ethylene had a number of advantages to commend it and that it should have a fair trial.—*Hospital Management.*

INDUSTRIAL MEDICINE

Occupation Disease Hazards.—The importance of having a knowledge of the industrial processes in order to apply industrial hygiene or industrial medicine, is well illustrated in the article, "Forty-two Occupation Disease Hazards in One Industry; The Tanning Industry as an Example of the Multiple Hazards in Industry." By Dorothy K. Minister, A.B., in the *Journal of Industrial Hygiene,* July, 1925.

The writer, while not a physician, points out the necessity for the industrial physician to acquaint himself with the processes of manufacturing in industry, and summarizes the fact that "a compilation such as this serves only to point out the danger points in this industry. Similar compilations for other industries, perhaps for most industries, could be made, because there is practically no industry today that will not present a similar multiplicity of hazards."

The claims for compensation demonstrate the proof of this statement as well as the necessity for a wider knowledge of processes of manufacturing on the part of the practicing M.D.

The article should prove of interest to general practitioners as well as those interested in industrial hygiene.—C. T. G.-R. in *Industrial Hygiene Bulletin,* New York State Department of Labor.

Industrial Irritations of Skin.—Claims for compensation classified under the occupational disease act, show the greater part of the cases to be lesions of the skin. The literature available to the general practitioners upon the subject of diseases of the skin directly attributable to industry is limited.

"Irritations of the Skin Due to Industrial Causes," by C. Guy Lane, M.D., Assistant Dermatologist, Massachusetts General Hospital, Boston, Mass., in *Nation's Health,* June, 1925, is a concise article which should be of interest, not only to the physicians, but to those interested in the subject of industrial hygiene.

It will have been of benefit in exciting the general practitioners as well as the industrial physician to a closer study of the relations of skin lesions to the worker's occupation, and so focusing thought upon remedial measures.—C. T. G.-R. in *Industrial Hygiene Bulletin,* New York State Department of Labor.

On Nitrous-Fume Poisoning.—Nitrous-fume poisoning is one of the most dangerous of industrial poisonings because of its insidious character. It is practically impossible to predict beforehand the seriousness of the after effects from the initial symptoms. The active poisonous ingredient is nitrogen dioxid (NO_2). When first inhaled, it produces a sensation of pain, burning, and choking in the throat and chest, the victim coughs violently, and raises yellow-tinged sputum. In most cases these first symptoms are soon relieved in the open air and the worker feels well enough to go home in half an hour or so. As a matter of fact, the real poisoning may then be just beginning to work. This is due to the fact that gradually the nitrogen dioxid is absorbed by the respiratory tract and converted into a solution of nitric and nitrous acids, which produce in time a generalized hyperemia, followed by an extensive extravasation of serum into the alveolar spaces and bronchioles, constituting, in other words, a progressive edema of the lungs. At the end of an hour or so the edema begins to produce symptoms, the cough returns, dyspnea develops, the victim breaths more and more rapidly, becomes progressively more and more cyanotic, and, in a large percentage of cases, finally dies of asphyxia. A certain number of victims recover from the edema only to develop bronchopneumonia. When a case has reached the stage of edema it is too late to do anything except give cardiac stimulation, use oxygen, or apply other symptomatic measures. Prevention of the edema can be accomplished by inhaling ammonia gas. A mixture is described and the best method for its use is outlined. —W. F. Boss, in *Boston Medical and Surgical Journal,* Dec. 10, 1925.

Women in Dusty Trades.—When discussing silicosis or other diseases of the lungs due to dust, people usually think of occupations and industries in which men alone are employed. We hear of "stone-cutters' consumption," "miners' phthisis," "steel-grinders' lung," clay-workers' diseases, "potters' rot," and other designations for lung troubles caused by dust, peculiar to each industry. Most of these terms call to mind trades in which women are not usually found, and this leads to the conclusion that no women are exposed to these diseases—especially silicosis. The conclusion is not warranted by facts.

A study of the industries in which silica dust may be found is being conducted by the Bureau of Industrial Hygiene. The investigation has shown so far that women and children as well as men are directly and indirectly exposed to silica dust by reason of their work. By indirect exposure is meant the condition of a factory in which dust fills the atmosphere, or covers the floors and walls of the rooms in which women work, occurring as a result of some of the processes of manufacture, although the women themselves are not actually employed at dusty operations. In 153 factories comprising over 20 industries in which silica dust in some

form is present, 7,680 men and 870 women were found employed. Of the women, about 400 were working at essentially dusty operations—as compared with about 5,000 men. This is direct exposure to the dust hazard. About one-half the remainder, or 200, were indirectly exposed by reason of the location of dusty processes in their working places, or by the fact that they were obliged to go into or pass through departments in which dusty work was carried on.

Among the industries in which women are employed in dusty processes are pottery, making both china or tableware and electrical porcelain, the manufacture of mica insulators, sand paper, scouring powders and abrasive soaps or cleansers, and several branches of the glass industry. In the manufacture of scouring soaps and scouring powders (ground and calcined silex —a quartz) is an abrasive commonly used. Powdered pumice is also used. Women in this industry fill and pack cans of powdered cleanser and wrap the cakes of scouring soap. The can-filling machinery in the modern factory is provided with an exhaust system which of course greatly lessens the hazard. The number of women in the glass industry is larger than in any other of the dusty trades. Children are also found in some branches of this work; 52 were working in the factories visited, 20 boys and 32 girls. The dusty operations in which these children are employed are glass cutting, rough cleaning, and in the case of boys, helping around glass furnaces, where batch shoveling is being done.

In describing a silicotic lung, Sir Thomas Oliver says in *Dangerous Trades:* "On examining microscopic portions of the lung which have undergone this change (fibrosis), there can be seen embedded in the thickened fibrous tissue particles of grit which exactly correspond in shape and size with those found on examining the dust removed from the mine in which the person works, or from the factory in the case of steel grinders' lung." While this does not refer specifically to glass cutting, it shows in a general way the danger of silica dust on the floors or walls of workrooms.—*Industrial Hygiene Bulletin,* New York State Department of Labor.

The Relation of Anthracosis to Tuberculosis and Pneumonia.—From prolonged observation in smoky districts and mining regions, the author concludes that anthracosis increases the incidence, severity, and mortality from pneumonia, but decreases the incidence, severity and mortality from tuberculosis. The untoward effect of preëxistent anthracosis on pneumonia is vastly outweighed by the salutary effect on both the incidence and course of pulmonary tuberculosis.—W. P. Nolan, in the *Medical Times,* February, 1926.

MEDICOLEGAL AND LEGISLATIVE NEWS

Positive Evidence Required.—That the statement of a physician that an injury "probably" hastened death from myocarditis cannot be considered as proof of a causal connection, is the opinion expressed by the Pennsylvania Superior Court, according to *Pennsylvania Progress* for November, 1926. There must be direct evidence to support a finding. This opinion was rendered in the case of Rose Sarko *vs.* P. & R. Coal and Iron Company.

The Pennsylvania Pharmaceutical Association lists the following bills to come before Congress during the present short session ending March 4th, with the Association's recommendations concerning the bills. A number of them will also be of interest to the medical profession: The Kelly Honest Merchandizing Bill, H. R. 11 (support); the Narcotic Bill, H. R. 11,612, requiring retail druggists to determine in advance whether a physician has written a narcotic prescription in the course of his professional practice only, before filling such prescription (vigorously oppose); creating a Bureau of Prohibition in the Treasury Department, H. R. 10,729 (continue opposition because chief would be appointed by President instead of Secretary of Treasury under whom he would work); Medicinal Spirits Corporation Bill, which would create a corporation to take over existing stocks of medicinal spirits; Federal Caustic Acid Bill, S. 2,320, governing the labeling of articles containing poisonous acids entering interstate commerce (oppose, as in its present form it would merely cause undue annoyance to the retailer and add to the present state of confusion); the Williams Bill, S. 4,235, establishing a board to pass on alleged violations of the Food and Drugs Act; the Goff Bill, S. 4,207, putting teeth in the National Prohibition Act (this measure practically beyond debate); and H. R. 3,391, prohibiting the sending of unsolicited merchandise through the mails (support).

Optometrists as School Examiners.—According to the *Optical Journal and Review,* a campaign is being planned to amend the Pennsylvania school laws to permit appointment of optometrists to examine the eyes of the public-school pupils. The case which brought the present agitation to a head was that of Henry Wolman, of Larksville, Luzerne County. The *Review* continues: "Dr. Wolman was appointed by the Larksville school board to examine the eyes of the public-school pupils in that borough and did fine work until the 'medics,' it is alleged, sensing danger to their political control, interfered and invoked the State school law which prohibits employment of any but registered physicians for this work. Dr. Wolman then volunteered to make the examinations without salary and the school board was again notified that the law forbids even this. Plans for a legislative campaign to amend the school law to permit the employment of registered optometrists as school examiners were discussed and a move made for a campaign when the 1927 Legislature convenes at Harrisburg next month. That the medical profession will fight the amendment to curtail its autocratic powers in the schools to the limit is certain, but the optometrists are 'fighting mad,' and it is believed that a vigorous campaign, aided by every one of the 1,500 optometrists in the State will bring results."

Maternity Home Not a Nuisance.—The Court of Civil Appeals of Texas, in reversing an order refusing to dissolve a temporary writ of injunction that had been granted, says it seemed plain that the threatened injuries of which the plaintiff complained were purely conjectural. The court considers that the maintenance of a maternity home is a legitimate business, and that a writ of injunction should not be granted because the plaintiffs apprehend that it may become a nuisance through the conduct of the house in violation of the provisions of the law directing the way in which it shall be conducted.—*Journal A. M. A.*

Telephone Operator Selecting Physician and Hospital.—In this case a male employee of a given company in Oklahoma sustained injuries due to a fall. The telephone operator in the office of the company 'phoned to a hospital to send an ambulance to remove the injured employee to the hospital, which was done. About fifteen minutes after the man was removed, one

of the members of the company arrived at the office, and having ascertained what had been done, called a physician and requested him to take charge. The physician called at the hospital, and satisfied that everything had been done, made frequent visits during the next few days. Having been advised by the patient that his services were no longer wanted, he discontinued attendance, leaving the patient in charge of the physician connected with the hospital staff. The injured employee asked for an award of $1,274.30. The industrial commission granted an award of $144. The Supreme Court of Oklahoma, in sustaining the award of the commission, states a person employed as a telephone operator has no authority as an agent of the employer to select a surgeon and hospital accommodations for an injured fellow employee.—*Journal A. M. A.*

Operation With Window Open, Bugs Getting into Wound.—In this case an appendectomy was done on a hot night in June, in a hospital in Mississippi. One or more windows in the operating room were left open during the operation. The windows were screened with wire, but a large number of hard-shell beetles came through. The surgeon claimed everything was done to prevent the beetles getting into the wound. The patient was discharged from the hospital ten days after the operation. Within another few days, the wound suppurated, and the patient was taken back to the hospital for further treatment. Before the patient was taken back to the hospital, two bugs of the kind claimed to have been in the operating room, were removed from the wound by the patient's mother. The lower court gave a verdict for the defendants, which was reversed by the Supreme Court of Mississippi, which claimed that leaving open or opening a window during an operation, whereby small bugs get through the screen and into the wound, authorize a finding of negligence, in the absence of a reasonable explanation for the opening. The Supreme Court contends that a surgeon must exercise reasonable care, when operating on a patient, to prevent foreign matter that will be hurtful to the patient from getting into the wound; that the bugs would not have gotten into the wound had the windows been kept closed, as they should have been, unless the operation could not have been properly performed without ventilating the operating room by opening the windows. The evidence did not show that it was necessary to open the windows on account of the heat. Further it was not a question that the surgeons did everything to prevent the bugs getting into the wound. The contention is that had the windows not been opened, the bugs would not have gotten into the operating room, and this act of opening the windows constituted negligence.—*Journal A. M. A.*

Who is Entitled to the Prescription?—Probably every pharmacist who has practiced his profession for any length of time has had occasion to ponder upon the question of who owns a prescription that has been filled by him in his store and dispensed. It happens repeatedly that a patient will ask for the original prescription back upon one pretext or another; sometimes the druggist is in a quandary whether to return the original or to give a copy. Probably in every case he is at a loss to know his rights in case he would rather give the patient a copy and keep the original. Suppose the patient should insist upon the return of the original prescription?

Our sorely tried pharmacist may receive some consolation in the knowledge that even the law enforcers (I should refrain from saying the law makers) are unable to agree fully upon that vital question of "who owns a prescription." A glance at the laws and at the judicial decisions of the various states of this country will indicate that this subject is not universally fixed, although we may say with some impunity at least that in Pennsylvania the matter is quite well settled.

It is the writer's personal contention that this subject is well covered by *Pennsylvania Pamphlet Laws for 1917,* page 208, sec. 19, governing the practice of pharmacy in this State, which reads as follows:

"All physicians' prescriptions compounded and dispensed shall be kept on file in the pharmacy in which compounded for a period of at least five years and during that time the same shall be open to the inspection of the police authorities upon presentation of an order from the court, or to the members of the Pennsylvania Board of Pharmacy."

Our law reports show no Pennsylvania case exactly in point on this subject. This is good evidence of the fact that no doubt the average patient regards a prescription blank as "a scrap of paper" and a copy serves just as well. Unquestionably, too, the average druggist uses good tact and satisfies the patient that by law he need give the patient only a copy.

The writer is of the opinion that under the authority of the act above cited, a pharmacist who fills and dispenses a prescription is entitled to keep it and need only give a copy, even where the patient demands the original. Thus we read in a Missouri case (108 Mo. 666), concerning the preservation of prescriptions, the following:

"The chief purpose of their preservation is that they may be used by courts and grand juries in their endeavors to control and regulate the sale of injurious articles and in the investigation of matters of public concern, and in these respects prescriptions become public and not private papers, and the druggist is merely their custodian."

Again in the same case we see the following significant extract which further substantiates the druggist's right:

"These prescriptions thus become the license or justification to the druggist for making sales which would otherwise be unlawful. As evidence of authority to make particular sales they would constitute private papers of the druggist," etc.—Sol. P. Hanig, Esq., Temple University *Pharmacy Alumni Bulletin.*

THE ANNUAL CONFERENCE OF SECRETARIES OF CONSTITUENT STATE MEDICAL ASSOCIATIONS FOR 1926

The annual conference of the secretaries of the constituent medical associations, to which the editors of the state medical journals were invited, was held in the auditorium of the building of the American Medical Association, Chicago, Ill., November 19-20. The Board of Trustees, the generous hosts, were in executive session at the same time. These conferences are more than worth while, and are far-reaching in their end results.

Pennsylvania was represented by Secretary Donaldson and Editor Hammond.

The opening address was delivered by Dr. Wendell C. Phillips, president of the American Medical Association, who stressed the difficulty experienced by the laity in understanding medical ethics; the necessity of coöperation on the part of all the members of the medical profession, in order to secure wise and judicious public-health legislation; the value of periodic health examinations, and the necessity for their being done by the family doctor.

"The Councilor-District Medical Society" was presented by Dr. D. S. Dougherty, Secretary of the Medical Society of the State of New York. The speaker considers that the economic phases are the most important. He suggested that the councilor districts consider, amongst their activities, the question of overlapping laws, all matters of health pertaining to the district, the problems more properly belonging to public welfare, public health, and the health offices, and urged that controversial subjects and acrimonious debates be eliminated so that peace and harmony may prevail. In regard to postgraduate work, it was disheartening to note the indifferent attendance at some of the meetings specially planned for this very important need. He stressed the featuring of social functions to make the district meetings more interesting and increase the attendance, especially by including the women. The cost of district meetings is an item, and in New York the State Society provides $100 per annum for expenses of each councilor district. The president and the secretary of the State Society make an annual visit to each councilor district. Avoid haphazard elections of officers. Oftentimes a good secretary, instead of being continued for the best interests of the district, is elected president. In the election of officers, do not favor one county too much. Papers presented should be short, concise, and to the point. Coöperation should be shown with the lay organizations in the district, as much good will accrue from the union of effort. The medical society must never take a subordinate position on a program with lay organizations, but show the latter that the former is all important.

Dr. Morris Fishbein, Editor of the *Journal of the American Medical Association,* gave a very instructive talk on "Impressions of Six State Medical Associations," based upon attendance at their annual sessions. (There are suggestions here that will prove of interest to county medical societies.—Editor). He thinks that scientific papers should be such, and not a rehash of textbooks, and said that it was interesting, in reading the programs of the annual meetings of the state societies, to find the same speakers on two or more programs, whose papers are invariably abstracts of textbooks, to whom he applies the term "Medical Barnstormers." He recommends that the programs of the state societies be constructive by anticipating their subjects sufficiently far ahead, so that a definite layout may be had and a morning session be devoted to the discussion of a selected topic. Now that physiotherapy is in the limelight, due vigilance must be exercised that papers are not presented with the idea of boosting a commercial house rather than its medical value. Too frequently sessions are spoiled by the reading of too many papers. Physicians like action, they like to see something being done; therefore, clinics of all kinds should be encouraged.

He was interested in observing how well-oiled was the machinery in some of the houses of delegates, and the orderly manner in which they functioned in comparison with the chaos when not so well lubricated. He expressed the belief that the president of a state society should be elected for his ability and willingness to work and knowledge of some parliamentary law, and not simply to bestow honor. The American Medical Association, in order to expedite the meetings of its House of Delegates, has its deliberations presided over by a speaker versed in parliamentary law. However, the selection of a speaker for the house of delegates of a state society would not be advisable. Much good would accrue if the presiding officer and the secretary of a state society would have a conference about a week previous to the annual session, in order that the two may become more familiar with the business to be transacted, and that the former may receive some instruction in regard to the rules, etc., of the society.

In regard to reference committees, some states have a Committee on Committees, which passes finally upon the reports of all the reference committees before they are submitted to the House of Delegates. For obvious reasons, such a committee is not deemed advisable. It is unfortunate the number of committees noted at times that have no report to make when called upon, either because no meetings of the committee have been called, or because of inactive material. The secretary should anticipate this situation, and communicate with the various committees in ample time to render more sure the preparation of a report.

In order to make attractive the public meeting held at the time of the annual sessions, a well-known speaker should be secured and properly advised that the address is to be of such character that it will interest a mixed audience and be grasped by the lay people present. Give the public meeting all possible publicity in order to build up a general interest, by using the newspapers, notices to clubs, and all other available agencies.

In the election of officers it would seem wise to eliminate superfluous vice-presidents, some states having as many as five. It is commendable to reëlect each year the same delegates to the A. M. A., providing they attend and function with efficiency.

The entertainments should vary. In some communities the annual banquet is changing for the better.

As to the Womans' Auxiliaries, in some states they have not been helpful, owing to not having the proper perspective of their field of endeavor, but will do good when properly directed. Some of the auxiliaries have overlapped the activities of the state society, resulting in unnecessary friction. The Womans' Auxiliaries should assume full charge of arranging for the entertainment of the visiting women at the annual sessions. They have done much good in placing *Hygeia* in schools, libraries, etc. They can do much good in women's clubs and societies by advising them properly in regard to matters of medical interest of which the club members have erroneous ideas. Much constructive work can be accomplished in this enlightenment. The Womans' Auxiliaries should not mix in with matters of medical legislation. (Possibly this applies more to those states where the activities of the Womans' Auxiliaries have not been properly guided by the component state medical society.—Editor.)

In order to obtain best results from scientific exhibits, they should be planned at least one year previous to the meeting.

Dr. Jabez N. Jackson, president-elect of the American Medical Association, stressed the duty of the members of a state society to ask for assignment on the scientific program of the annual sessions. Other features covered were the social aspects, Womans' Auxiliaries, and public education.

In "The Need for a Uniform Constitution and By-laws," Dr. George E. Follansbie, Cleveland, Ohio, emphasized that it was necessary from the standpoints of economy and efficiency.

"The Part of the State Journal in Medical Organization," was presented by Dr. F. A. Long, Editor of the *Nebraska State Medical Journal,* who advocated that the writer of editorials be paid for the same, in order to obtain the best results, and that editorials should deal with everyday problems. The state journals should maintain high ideals, and should reflect the work of

the state society and the American Medical Association. The editorial pages should be an open forum. Free copies of the journal should be sent to the libraries in the respective State. Books should not be accepted for review from publishers who do not advertise in the journal.

Dr. D. E. Sullivan, Secretary of the New Hampshire Medical Society, presented the subject, "How Can We Secure Closer Coöperation with Other Professions and with the Laity?"

The closing session was devoted to a conference on periodic examinations of apparently healthy persons. Dr. Robert M. Schauffler, president of the Kansas City Health Association, delivered an address on "Educating the Physician for Public-Health Speaking and for Periodic Health Examinations." He advised that truths be presented, well selected, plainly stated, graphically illustrated, and emotionally stressed; with an application which will inspire action of the individual, of the group, and ultimately of the community. The importance of medical science must be emphasized, and it is necessary to show the individual his duty to apply the facts of medical science to safeguard his own health and that of his family. The necessity of public-health agencies should be detailed. These include international, national, state and county, and local. The final appeal for some current need logically will follow the general presentation given. In order to accomplish the most good by public-health addresses and to avoid dangers, it is important that the speakers should be assigned from some central agency. This should be the publicity committee of the County or State Medical Society. If the local organizations interested in public health are well organized and managed, and have an executive secretary or an educational secretary charged with publicity, they should have an advisory committee of doctors in good standing in the county society to suggest speakers.

As to periodic health examinations, they must be done by the general practitioner. They must be well done, and big things must not be overlooked, nor the importance of lesser findings underestimated. Adequate advice must be given in regard to correction of conditions found—physical, faulty habits, etc. Treatments which are not essential must not be started.

Dr. John M. Dodson, Executive Secretary, Bureau of Health and Public Instruction, American Medical Association, gave "The Present Status of Periodic Health Examinations."

The secretaries of the state medical societies were then called upon to report the progress that had been made in their several states in regard to periodic health examinations.

A PSYCHIATRIC CREED

The final report of the Committee on the Legal Aspects of Psychiatry of the American Psychiatric Association contains the following official statement of position:

WE BELIEVE—

(1) THAT the psychiatrist's chief concern is with the understanding and evaluating of the social and individual factors entering into failures in human life adaptations.

(2) THAT crime is a designation for one group of such adaptation failures, and hence falls definitely within the focus of psychiatry, not excluding, of course, certain other branches of science.

(3) THAT crime as well as other behavior and characterologic aberrancies can be scientifically studied, interpreted, and controlled.

(4) THAT this study includes a consideration of the hereditary, physical, chemical, biological, social, and psychological factors entering into the personality concerned throughout his life as well as (merely) in the specific "criminal" situation.

(5) THAT from a study of such data we are enabled in many cases to direct an attack upon one or more of the factors found to be active in a specific case to effect an alteration of the behavior in a propitious direction; while in other cases where this is not possible we are able in the light of past experience and discovered laws to foresee the probabilities to a degree sufficient to make possible proper provision against subsequent (further) injuries to society. By the same experience and laws we are enabled in still other cases to detect and endeavor to prevent the development of potential criminality.

(6) THAT these studies can be made with proficiency only by those properly qualified; i.e., scientists who have made it their life interest and study to understand and treat behavior disorders.

(7) THAT this point of view requires certain radical changes in legal procedure and legislative enactment, insuring the following provisions:

(a) The court appointment, from a qualified list, of the psychiatrists testifying in regard to the mental status, mechanisms, or capabilities of a prisoner; with opportunity for thorough psychiatric examination, using such aids as psychiatrists customarily use in practice, clinics, hospitals, etc.; with obligatory written reports, and remuneration from public funds.

(b) The elimination of the use of the hypothetical question and the terms "insane" and "insanity," "lunacy," etc.

(c) The exemption of the psychiatrist from the necessity of pronouncing upon intangible concepts of religious and legal tradition in which he has no interest, concern, or experience, such as "responsibility," "punishment," and "justice."

(d) The development of machinery adequate to the requirements of the psychiatric point of view in criminal trials and hearings, including court clinics and psychiatrists, and ultimately a routine compulsory psychiatric examination of all offenders with latitude and authority in the recommendations made to the court as to the disposition and treatment of the prisoner.

(8) THAT this also entails certain radical changes in penal practice, including:

(a) The substitution of the idea of treatment, painful or otherwise, for the idea of retributive punishment.

(b) The release of prisoners upon parole or discharge only after complete and competent psychiatric examination with findings favorable for successful rehabilitation, to which end the desirability of resident psychiatrists in all penal institutions is obvious.

(c) The permanent legal detention of the incurably inadequate, incompetent, and antisocial, irrespective of the particular offense committed.

(d) The development of the assets of this permanently custodial group to the point of maximum usefulness within the prison milieu, industrializing those amenable to supervised employment, and applying their legitimate earnings to the reimbursement of the state for their care and maintenance, to the support of their dependent relatives, and to the reimbursement of the parties injured by their criminal activities.

(9) THAT effective preventive medicine is applicable in the field of psychiatry in the form of mental-health conferences and examinations, child-guidance clinics, mental-hygiene clinics, lectures and literature, and similar institutions and efforts.

(10) THAT the protection outlined provide an efficient and scientific solution to the problems of crime, viz:

(a) The protection of society.

(b) The rehabilitation of the "criminal" if possible.

(c) His safe and useful disposition or detention if rehabilitation is impossible.

(d) The detection and the prevention or deflection of the development of criminality in those potentially predisposed.

THE MEDICAL SOCIETY

OF THE STATE OF PENNSYLVANIA

OFFICERS' DEPARTMENT

WALTER F. DONALDSON, M.D.
Secretary
8062 Jenkins Arcade Bldg.,
Pittsburgh, Pa.

THE 1927 HONOR ROLL

Several component society secretaries have placed their county societies in line for leadership in the 1927 Honor Roll earlier than usual. On December 24th Secretary Scott of the Greene County Society remitted to this office the 1927 dues of 93 per cent of his members. As early as December 15th, Secretary Fleming of the Schuylkill County Society had remitted to this office the 1927 State Society dues of twenty members; Secretary Buyers of Montgomery County, twenty-one members; while Secretary Logan of Elk County and Secretary McKown of Wyoming County had each remitted State Society dues for 50 per cent of their members. Since comparisons are said to be odious, we shall avoid mentioning the records of some other societies, and trust that this timely tribute to the enterprise of the four secretaries above mentioned will result in new or renewed efforts on the part of all component society secretaries to keep their members in good standing.

All the secretaries requesting same have been provided with statement blanks to be mailed to the members of their societies January 1st.

MEDICAL DEFENSE

Medical Defense Case No. 181 has just been concluded by a nonsuit granted after five days' trial by the court of the county in which suit was instituted. In a letter reporting the outcome of the case, the member successfully defended expressed his gratitude not only to the State Society for its assumption of the responsibility for his defense and the payment of the attorney's fee, but also to "the many members of my county medical society who assisted." The defendant in this case was well fortified because, while treating the patient who later brought suit for alleged malpractice, he had had consultation and x-ray pictures of the fractured leg.

We trust all our members will remain in line, not only for defense against suits for alleged malpractice, but for successful defense at all times by:

(a) Paying on or before March 31st their county medical society dues for the current year.

(b) Making use of the x-ray release blanks—which may be obtained from county society secretaries—when treating patients with suspected fracture, dislocation, and foreign-body injuries when x-ray examinations are refused or not obtainable.

(c) Preserving and recording a complete clinical history of patients under treatment.

FILE

The triplicate of the receipt which will be given you by the secretary of your county medical society when you pay your 1927 dues is blue in color, and conveys its own suggestion that it be filed. On the back of this receipt you will find the name and address of the Councilor for your district and valuable advice for your guidance should you be threatened by a suit for alleged malpractice.

BENEFITS

(1) We know of no greater value received from five dollars invested than that from the five dollars collected from the members of the component county medical societies for remittance to the State Medical Society. In behalf of one member in 1926, who had no other means of defense in a suit for alleged malpractice, the State Society expended $500 in attorneys' fees in the successful conduct of his case; and for another member, who evidently valued the defense by his State Society more than that by his commercial insurance company, attorney's fee

amounting to $350 in the successful conduct of his case.

(2) The findings of the current nation-wide survey being conducted by the American Medical Association regarding indigency among physicians, and the consideration of plans for the relief of same will serve to emphasize the leadership of the Medical Society of the State of Pennsylvania with its slowly accumulated Benevolence Fund of approximately $30,000. This is a benefit of membership in which none of us hope to participate; nevertheless we can all enjoy the satisfaction attendant upon our small membership contributions to its accumulation and its administration.

(3) The printed pages of our official organ, the ATLANTIC MEDICAL JOURNAL, which is mailed monthly to all our members, convey their own inherent merit.

(4) The avenue to Fellowship in the American Medical Association, which is open only to county medical society members in good standing, is not the least of the benefits of such membership that will be mentioned at this time.

DISASTER RELIEF CHIEF

At the meeting of the Board of Trustees, December 7th, in Harrisburg, Dr. Theodore B. Appel, of Lancaster, was selected Director of Medical Relief in Disaster in Pennsylvania.

PAYMENT OF PER-CAPITA ASSESSMENT

The following payment of per-capita assessment has been received since November 16th. Figures in first column indicate county society numbers; second column, State Society numbers.

For 1926—					
Nov.	20	Lackawanna	212-219	7570-7577	$40.00
Dec.	6	Venango	54	7578	5.00
	13	Washington	133	7579	
	14	Allegheny	1284-1285	7580-7581	10.00
		Berks	135	7582	5.00
For 1927—					
Nov.	16	Huntingdon	1	5	5.00
	20	Lawrence	1-2	6-7	10.00
		Franklin	1-3	8-10	15.00
		Elk	1-9	11-19	45.00
		Berks	1	20	5.00
	26	Dauphin	1-2	21-22	10.00
		Montgomery	1-4	23-26	20.00
		Lycoming	1	27	5.00
Dec.	2	Luzerne	1-2	28-29	10.00
	3	Elk	10	30	5.00
	4	Mifflin	1-7	31-37	35.00
	6	Adams	1-5	38-42	25.00
	8	Luzerne	3	43	5.00
	9	Wyoming	1-6	44-49	30.00
	10	Schuylkill	1-20	50-69	100.00
	13	Delaware	1-4	70-73	20.00
		Erie	1-8	74-81	40.00
		Washington	1	82	5.00
	14	Montgomery	5-21	83-99	85.00
		Luzerne	4	100	5.00

CHANGES IN MEMBERSHIP OF COUNTY SOCIETIES

The following changes have been reported to December 15th:

ADAMS: *New Member*—Edward A. Runyan, Bendersville.

ALLEGHENY: *New Members*—William J. Crookston, 711 N. Third St., Harrisburg (Dauphin Co.); William W. Maxwell, Seventh Avenue Hotel, Pittsburgh. *Removal*—Henry M. Snitzer from Pittsburgh to Steubenville B. & T. Bldg., Steubenville, O. *Resignation*—Vernon L. Andrews, Pittsburgh; W. A. Wolf, Homestead; James M. Boice, Burgettstown.

BERKS: *New Member*—Solis-Cohen B. Hertzog, 2128 Perkiomen Ave., Reading. *Reinstated Member*—J. Ellis Kurtz, 22 So. Fifth St., Reading.

CLEARFIELD: *Death*—Samuel D. Bailey, Philipsburg (Jeff. Med. Coll. '84), Nov. 13, aged 70.

DAUPHIN: *New Members*—William G. Jefferson, Steelton; William Lee Clark, 1927 Market St., Harrisburg.

DELAWARE: *New Members*—John M. Coe, R. F. D. 3, Media; John B. Klopp, 1023 Edgmont Ave., William J. Padgett, 1618 W. Ninth St., J. Philip Van Keuren, 21st St. & Providence Ave., Chester.

ELK: *New Members*—Augustus C. Luhr, J. F. Richards, St. Marys.

ERIE: *Removal*—Charles O. Peters from Albion to 519 W. 8th St., Erie; Astley G. Krum from Erie to 900 Beach Drive North, St. Petersburg, Fla.

FRANKLIN: *New Members*—Chester P. Swett, South Mountain; Juanita S. McLoughlin, Mercersburg. *Reinstated Member*—Joseph Ennis, Waynesboro.

LAWRENCE: *New Members*—James D. Crawford, John Palazzo, New Castle.

LACKAWANNA: *Reinstated Members*—Gregorio Catalano, 357 Chestnut St., Dunmore; William S. Johnson, Joseph S. Murrin, Carbondale; Philip A. Lonergan, Dickson City; Charles S. Gelbert, Dime Bank Bldg., Samuel Z. Myers, Dime Bank Bldg., William A. Stevens, 2103 N. Washington Ave., Leon G. Sweeney, 1206 Marion St., Scranton.

LUZERNE: *New Members*—H. Gordon Guyler, 37 Mallory Place, Wilkes-Barre; William R. Sulman, 77 N. Church St., Hazleton; R. L. Mantione, Post Office Bldg., Pittston. *Death*—George W. Harrington, Hazleton (Jeff. Med. Coll. '94), recently, aged 58.

LYCOMING: *New Member*—Ruth S. Kull, 943 E. Third St., Williamsport.

MCKEAN: *Death*—Samuel H. Haines, Bradford (Jeff. Med. Coll. '89), Nov. 23, aged 63.

MONTGOMERY: *New Members*—Jacob C. Rosen, Pottstown; Edward E. Sprenkel, York Road & West Ave., Jenkintown; Harry B. Fuller, Phœnixville.

NORTHAMPTON: *Death*—Richard H. Beck, Hecktown (Univ. of Penna. '74), Nov. 29.

PHILADELPHIA: *Resignations*—Nedjelko Antunovic, So. Chicago, Ill.; Walter A. Ford, Philadelphia; Joshua E. Sweet, New York. *Deaths*—Joseph Goldstein (Med. Chir. Coll., Phila., '06), Nov. 9, aged 46; Louis M. Jacobs (Temple Univ. '21), Nov. 21, aged 30; John D. Moore (Univ. of Penna. '89), recently, aged 61; C. F. M. Leidy, Towson, Md., formerly of Philadelphia (Univ. of Penna. '95), Nov. 26, aged 43.

SCHUYLKILL: *New Members*—Lewis H. Bacon, 300 Mahantongo St., Pottsville; John M. West, Robert A. Follweiler, Tamaqua; William A. Breslin, William A. Schmidt, 10 N. Jardin St., Shenandoah.

UNION: *Death*—Edgar T. Shields, Harrisburg (Univ. of Penna. '06), Nov. 22, aged 49.

VENANGO: *Reinstated Member*—Henry B. Gaynor, Polk Institute, Polk. *Transfer*—Burton A. Black, Grove City, to Mercer County Society.

WASHINGTON: *New Member*—John Cunningham, Box 67, Eldersville. *Reinstated Member*—Joseph S. Wilson, Meadow Lands. *Removal*—Fred C. Stahlman from Charleroi to Asheville, N. C. (Box 1772).

WYOMING: *Death*—Ralph M. Niles, Nicholson (Med. Chir. Coll., Phila., '99), Nov. 21, aged 48.

COMMISSION ON COMPENSATION LAWS

LEVER F. STEWART, *Chairman*

Clearfield, Pa.

CHANGES IN THE COMPENSATION LAW

Within a few days the Society's special legislative committee has been able to take an active interest in putting the changes in the present Compensation Law recommended by the Compensation Commission before the next session of the Legislature. With the coöperation of the Trustees of the Society, the committee has undertaken negotiations with legal talent conversant with the law and the need of changes in it. It is practically assured that amendments covering many needed improvements in the Compensation Law from the point of view of the injured man and the physician who cares for him will go before the next session of our Legislature in a form that is acceptable to all interests. The Commission reports with pleasure that it has been possible to have coöperation between it and the Pennsylvania State Hospital Association. The Commission confidently hopes the labor and effort of the special committee on legislation will bear fruit that will go far toward meeting the needed changes in our Compensation Law.

County Society Reports

ALLEGHENY—NOVEMBER

The regular monthly meeting was held on Tuesday, November 16, at which the following program was given:

Control of Hemorrhage: Dr. R. M. Entwisle.—Most hemorrhage needs no artificial aid for its control; otherwise life would soon become extinct. Many large vessels spontaneously cease bleeding and no artificial means is required for their control. Today we control hemorrhage by pressure, tourniquets, specially designed instruments, ligatures, and heat. Proper pressure controls practically all unconcealed hemorrhages, and the tourniquet needs no discussion. The hemostat and ligature suggest operative procedures. Traumatic hemorrhage usually requires surgical treatment for its control, and this is especially true of the intra-abdominal types. Heat was one of the earliest hemostatics, and is today applied by cautery and electrocoagulation. While drugs sometimes have their indications, silver nitrate in strong solution or pure form, chromic acid, tannic acid, or copper and zinc salts are used but slightly in modern practice. Calcium salts have offered no striking results. Adrenalin, novocain, blood serum, coagulin, thromboplastin, and blood transfusions are grouped as biologic or serologic hemostatic agents. Adrenalin is most useful. Blood serum has no use in control of a hemorrhage in a normal individual unless as an emergency measure. Blood transfusion depends upon its contained serum for its usefulness, and probably has its great and only use in replacement of blood suddenly lost.

Demonstration of Apparatus for Transfusion of Unmodified Blood: Dr. Moses H. Baker.—The apparatus presented was invented by Dr. A. L. Soreci, and is sold under the trade name of "The Little Factotum." It is a one-man apparatus requiring no citrate, and it rarely requires cutting down on the recipient's vein. The principle is a closed system with a two-ball valve at either end of a metal chamber to which a small (2-c.c.) Record syringe is connected. Rubber tubing is used to connect the needles in the veins to the chamber. The blood will clot in the needles before clotting in the valves. In order to transfuse with this apparatus, it is filled with salt solution, the needle is introduced into the recipient's vein, and enough solution is allowed to start the functioning. When a good flow is obtained from the donor's vein, it fills and empties the syringe 250 times for a 500-c.c. transfusion.

L. G. BEINHAUER, M.D., Reporter.

CAMBRIA—NOVEMBER-DECEMBER

The annual banquet of the Society was held at the Sunnehanna Country Club, Johnstown, on November 18, 1926, at 7 p.m. This yearly meeting is known as ladies' night, and is held for the doctors and their wives and friends. No scientific program is offered.

The December meeting convened at the Y. M. C. A., Johnstown, on December 9, 1926, with Dr. L. W. Hornick presiding. Dr. Louis Clerf, of Philadelphia, gave an illustrated talk on "Bronchoscopic and Esophagoscopic Cases of Interest to the Medical Practitioner."

Following Dr. Clerf's talk, the officers for 1927 were nominated.

W. B. TEMPLIN, M.D., Reporter.

ELK—NOVEMBER

The Elk County Society met November 11th at Ridgway. Dr. Lewis L. Hobbs, Jr., of Ridgway, presented in a very interesting manner the subject of "Abdominal Pain."

Dr. A. C. Luhr and Dr. J. F. Richards, of St. Marys, were duly elected members.

Administration of the Annual Registration Act came in for considerable discussion. Since the failure under the act to secure convictions of alleged illegal practitioners is said to be due, not so much to lack of evidence as to "reluctance of district attorneys and stupidity and bias of the average juror," we cannot see where a dozen special investigators of the Attorney General's department are going to overcome ignorance and prejudice. We must educate the public. We should each contribute $10 a year, and having first ascertained how preposterous the claims of the various paths and cults are, put on a state-wide educational campaign. We cannot do much campaigning on a dollar a year. We must either do it right or let the public learn by experience. Charity is not the only thing that begins at home, however, and it behooves us as individuals and as organizations first to put our own houses in order.

SAMUEL G. LOGAN, M.D., Reporter.

ERIE—NOVEMBER

At the meeting of the Society, November 2, Dr. Paul G. Weston, of Jamestown, N. Y., delivered an address on "Acute Glandular Fever," a disease not very well known. It has been described under various names, such as Pfeiffer's disease, acute benign leukemia, infectious

mononucleosis, acute lymphadenosis, etc. There have been a number of epidemics of acute glandular fever, notably one of three hundred boys in a New Jersey school.

The incubation period is between five and nine days. The symptoms in general are similar to other acute infections; viz., chills, backache, leg ache, headache, and some have angina with it. The febrile period lasts three to seven days, sometimes longer. The glands do not enlarge until after a few days of the fever. The cervical lymph glands are the ones more often involved, although in some cases axillary and inguinal glands are also involved. The patient appears profoundly ill. The glands are very painful; they become soft and fluctuate, and their breaking down and discharging through the skin *appears* to be inevitable. They have been lanced, which is a very bad practice, as they do not discharge pus when they are lanced. They should be let alone, and they return to normal of themselves. The convalescence is sometimes protracted, the glands remaining palpable for some time. One patient has had three recurrences. The blood count is often slow in reaching normal. Sometimes the abnormal mononuclear cells persist for some time.

Dr. John B. Deaver, of Philadelphia, addressed the Society, October 21st, on "Pancreatitis." Dr. Stanley P. Reimann, also of Philadelphia, talked on the pathology of pancreatitis at the same meeting.

ANNA M. SCHRADE, M.D., Reporter.

LEBANON—NOVEMBER-DECEMBER

In November the Society was addressed by Dr. W. Blair Mosser, Philadelphia, on the subject "Goiter." Dr. Mosser stated that iodin in the treatment of this disease has been very much overdone. He agrees that it has a place in the treatment of goiter, but is not the only treatment and is not to be recommended in all forms of thyroid disease. Surgery is indicated in very many cases, but should be done only by an operator trained in goiter surgery.

In December the Society had the pleasure of viewing a film put out by the United States Public Health Service, showing venereal lesions. Dr. E. S. Everhart, of Harrisburg, was kind enough to bring these films and use them for an illustrated talk.

JOHN D. BOGER, M.D., Reporter.

LUZERNE—DECEMBER

The regular meeting of December 1st was held in the Society Building, with President Mayock in the chair. On motion of Dr. Lewis H. Taylor, the Society voted to endorse the work of Dr. Charles H. Miner, of Wilkes-Barre, as State Secretary of Health, and to recommend Dr. Miner's reappointment to Governor-Elect Fisher.

The Etiology of Miscarriage: Dr. Albert G. Gibbs, Nanticoke.—Recent studies in embryology tend to show that trauma and emotional shocks are not the underlying causes of miscarriage in the majority of cases. Usually, if the fetus and placenta are examined, there will be found inflammatory and degenerative changes in them indicating previous death or disease. Embryologic studies made on the products of miscarriage have led us to a very conservative attitude toward the ordinary environmental causes hitherto considered likely.

Recent studies in animals and in man demonstrate the close relation between abortion and apparent sterility, and it has been shown that what was formerly considered sterility is really only a high intra-uterine death rate among a practically normal number of embryos. In rats, the absence of the seminal vesicles is a cause of abortion. Impregnation may result in a normal number of embryos, but only one out of four or five of these will come to maturity. It is possible that corresponding defects in the genital apparatus of man may cause apparent sterility by habitual abortion.

Malformation and malposition of the uterus, extensive lacerations, and new growths may prevent the uterus from harboring the growing fetus. Emotional upset when effective as a cause of abortion may act through endocrine disturbance. Inflammatory disease of the endometrium and syphilis may cause death of the fetus. Overwhelming acute infections of the mother may do the same. Sclerosis of the maternal arteries may lead to intra-uterine hemorrhage and abortion when the trophoblast becomes active.

Defective diet has long been known as a cause of abortion. In the male it weakens the spermatozoa; in the female it affects either the egg or the host.

The Treatment of Chronic Gonorrhea in the Male: Dr. William Baurys, Nanticoke.—We consider gonorrhea chronic when the anterior and posterior urethræ have developed either the hard or soft infiltration, when the prostatic ducts begin to fill up with a chronic type of exudate, and when there is a definite sclerotic process going on in the vesicles. Local applications play a most important part, but they do not reach the deeper tissues. General hygienic measures are necessary to build up the individual's resistance. Vaccines and serums will benefit five or six per cent of patients. In the acute articular form of gonorrheal arthritis with little or no change in the joint pathology, vaccines are very helpful in reducing the associated fever.

Hydrotherapy in the form of hot rectal douches and heat in the form of high-frequency currents are very helpful. They are excellent substitutes for prostatic massage when the latter is contraindicated. If there is a stricture, dilatation is necessary. With or without stricture, chronic gonorrhea is an indication for dilatation of the urethra both anteriorly and posteriorly. This breaks down hard infiltration and unlocks closed areas of infection. Immediately following dilatation, the tract is irrigated with silver nitrate under slight pressure with a head of two or three feet. With the bladder full, massage of the prostate and vesicles is the next step, using as much force as is tolerable. If red blood cells appear in the microscopic field of the strippings, the massage has been too vigorous. Ten-day intervals for dilatation and three-day intervals for irrigation and massage are suitable. Following prostatic massage, instillation of a gonococcidal drug is helpful. Of these, mercurochrome is a very valuable drug at this period.

The criteria for stopping treatment are relief of subjective symptoms, absence of pus in centrifuged specimens of urine, freedom of the prostatic exudate from pus cells, failure to bring back any evidence of the infection after traumatizing the urethra by means of irritating drugs and instrumentation, and negative urethroscopic findings.

Dr. Long: While trauma may not be the ultimate cause of abortion, we still may find that it is the exciting cause. We cannot get away from it, especially in lawsuits. This is analagous to hernia. We know that hernia does not result from the accident, but that the accident brings out the previously existing defect. In these days of contraception and attempted interference with impregnation, could not that be the cause of repeated miscarriages? I sometimes think these con-

traceptive practices to be the cause of deformed children also.

Dr. Jacobosky: I cannot say much about automobile rides as a cause of miscarriage, but they are a contributing etiologic factor in the condition mentioned in the second paper. One of the causes of chronic urethritis is an infection of Cowper's glands. They may be a seat of chronic infection and pour out infection into the anterior urethra, when it is well to give some instrumental massage to the glands. A word about argyrol. Personally I have been against the use of it; first, because many of the drugs we use are not gonococcides. If they were, they would not cure, because it is not so much a gonococcic infection as a secondary infection. Argyrol is a lymphagogue, and is apt to cause some of the complications we see.

Dr. L. Edwards: In hospitals we are troubled so much with miscarriages being sent in. These are caused by certain microbes that are allowed to walk around. This doctor could not give the method of eradicating these microbes but our committee in the courts could.

Dr. Mayock: The major part of a genito-urinary practice is concerned with chronic gonorrhea in the male. First, one must consider that here is a youth who does not know what poor health is, who has no serious inconvenience, and probably does not want to coöperate. When these patients know they have to come for nine months or so, they want to drop the treatment. The patient who will coöperate and keep himself in the best possible shape and keep his resistance up, is the patient who will usually get well. Vaccines have no specific action. Any foreign protein that will produce a reaction will give the desired result.

Dr. Janjigian: In chronic gonorrhea it is sometimes hard to find the gonococcus in the secretions. There is an ascitic fluid now on the market which, if mixed with bouillon in equal parts and seeded with prostatic fluid, will show the gonococcus in culture after 36 hours' incubation in positive cases.

Dr. Baurys, in closing: It is usual that after the third month the gonococcus disappears from the urethra and secondary organisms invade. If the urethritis is gonorrheal in origin, the gonococcus can be found, but only by special methods, as mentioned by Dr. Janjigian. In determining the strength of silver nitrate, a very practical way to use it is to have a hundred-per-cent solution of silver nitrate and make dilutions beginning with one drop to 100 c.c. of water, and gradually increase the strength as the tolerance of the patient is increased. You can go up to 20 to 30 drops to the liter.

LEWIS T. BUCKMAN, M.D., Reporter.

PHILADELPHIA

November 24, 1926

OBSTETRICAL NIGHT

Dr. James R. Goodall, Montreal, Quebec (by invitation): The Rôle of the Cervix in the Puerperium.—Within the last year several authors have written that the mortality and morbidity from childbirth has not greatly changed from that of many years ago. While this is hardly true of mortality, at Montreal at least, it is a fact that the morbidity has not greatly altered. Grave septic cases are much fewer, but cases with a mild morbidity are as prevalent as ever.

What is the reason for this discrepancy of statistics? The work is as yet incomplete, yet sufficient advance in study has been made to permit of several conclusions. Heretofore the standard of morbidity has been set as a temperature above 100.4° for two consecutive days. This is too low. At Montreal, any temperature above 99° on three consecutive days after the first day postpartum and all other cases which later develop surgical complications are classed as morbid. This inclusion of a very high percentage of morbidity which is never recorded by temperature, this inclusion of obviously morbid cases, raises the percentage of morbidity from 8.5 to 30 or 40 per cent. For instance, a lung infarct or a thrombophlebitis may never run a temperature above 99°, yet afebrile thrombophlebitis must be regarded with high respect and as a cause for worry until the patient is well.

A critical review of several hundred cases showed that 50 per cent of multiparas and 30 per cent of primiparas present morbidity in the puerperium. This is contrary to the expected, since in the multipara the vaginal outlet is more relaxed, the patient is acquainted with the procedure, and there is less manipulation. How explain this? Research in these cases, showing a subinvolution or a low-grade temperature, possibly without pus, reveals an astonishing result. On examination the fifth day postpartum in forty-five cases, there was demonstrable a thin delicate streptococcic membrane over the os and cervical canal, or the cervix was granular, bleeding readily. One fornix usually was stiffened and was tender on pressure, yet the perineum would heal by first intention and the condition itself was ephemeral. Cultural studies are still incomplete.

There are two factors causing this morbidity; antecedent cervical infection and infection during parturition. In 7 per cent of cervical lesions the gonococcus is the causative agent. If these organisms are demonstrable, why may there not be others which act similarly? The streptococcus is known to have persisted in the cervix for nine years, and its latent nature is evidenced in recurrent chronic erysipelas. In morbid cases, the majority are mild and many show no systemic symptoms. While obstetric technic (washing the vulva, gloves, etc.) relieves the severe infections, the upper infections remain untreated. The very mildness of the infection argues an antecedent chronic infection, and in a goodly percentage of these puerperal morbidities the cervix is the site of the organisms.

At McGill University the teaching is divided into dystocia, hemorrhage, toxemia, and infections. The infections are subdivided into the local (of little interest), those spreading by continuity (e. g., gonorrheal), thrombophlebitic, and lymphatic. The more acute infections are likely to be carried through the lymphatics, the attenuated cases via the veins (thrombophlebitis). Specimens show that while there had been the most widespread thrombophlebitic infection, so little damage had resulted that involution was complete, yet the patient died months later of embolus. The proportion of endocervical infection in multiparas as compared to nulliparas is 93 per cent to 7 per cent, nor is the gonococcus so much of an etiologic factor as has been supposed. Streptococci do no always cause a virulent infection—not even the Streptococcus hemolyticus. In a recent paper the author concluded that puerperal sepsis was primarily autogenetic, though the origin of intrinsic sepsis was not definitely determined. While meticulous measures against external infection will greatly reduce the old rate of morbidity, there yet remain a certain per cent which must be attributed to an intrinsic factor. The vagina cannot be sterile; endocervicitis is a great cause of intrinsic infection.

Is it just, therefore, to hold the physician responsible for all untoward symptoms of the puerperium?

The primary lesions in this group of morbidity from intrinsic cause are in the cervix, and their result is subinvolution. Chronic metritis is a misnomer, since the pathology reveals a lack of absorption of useless material, with resulting overabundance of connective tissue. Rather call it chronic subinvolution. To bring the uterus to normal after parturition, 900 grams must be lost through contraction, retraction, and cell metabolism. Intrinsic sepsis may arise either because the vagina is the harbinger of as yet unimplanted pathogenic organisms, or through definite microbic disease of the cervix, with latent organisms in the tissues.

Treatment consists of the usual external shaving and toilet of the vulva, and the injection into the cervix of a 2-per-cent solution of mercurochrome through a sterile catheter. Daily thereafter for seven days postpartum injections of the same solution are made into the vagina by the nurse. Through the use of this measure fetid lochia has been abolished, infection has been diminished, and the stay in the hospital decreased. The disease, however, antedates labor and is but lighted up at that time. The mercurochrome injections cannot affect the organisms that are deep in the tissues, and treatment should precede the pregnancy.

To recapitulate: Morbidity has not appreciably changed in totality, but has changed in character; the highest percentage of virulent infection occurs after induced abortion; multiparas show a higher morbidity than primiparas; frequently a remote thrombophlebitis will result; the adnexa usually are not involved; the primary infection lies in the cervix during the early puerperium; it is probably the alteration of the cervix in subinvolution which causes this mild morbidity; the cervix should be healed antecedent to pregnancy and labor.

Dr. Frederic C. Holden, New York City (by invitation): Present-Day Gynecology at Bellevue Hospital. —This paper covers 11,459 cases showing a low operative incidence. Only the most interesting points are touched upon—abortion, postpartum sepsis, salpingitis (acute and chronic), ectopics, cervix uteri, fibroids, and carcinoma.

From 1920 to 1925, of 11,459 admitted to the wards 2,500 were operated upon—21.58 per cent. This low incidence of operation is the result of a careful history and preoperative study of each case, so that, as often happens, operation is not done on a wrong diagnosis. There were 3,132 abortions, termed "threatened" when there was but slight pain and bleeding without dilatation, and "inevitable" when there was bleeding, pain, and dilatation. Many terminate spontaneously, but if they do not, the afterbirth is removed from the cervix with sponge forceps, a gauze pack is placed in the vagina for twenty-four hours, and pituitrin is given. Sixty-two per cent are packed once, 10 per cent twice. Hospitalization runs from six to twenty days. Because of persistent bleeding with a normal temperature, it was necessary to curet 4.5 per cent. All treatment in cases of abortion is conservative until it has demonstrably failed, for morbidity and mortality are in direct relation to intervention. The curet converts many clean cases into septic cases, and septic cases require more conservative care than the aseptic.

SEPSIS, postabortum and postpartum, depends for its prognosis upon the blood picture, the infecting organisms, the pathology, and the physical condition of the patient. Treatment is individual, and requires intensive nursing. The patient, if possibile, is kept outdoors on the balcony, in a moderate Fowler position. Daily evacuation of the bowels is secured by mineral oil and milk of magnesia and a simple enema when necessary, but vigorous catharsis must be avoided. For diarrhea, boiled milk and barley water, with paregoric every three or four hours are indicated; for vomiting, autolavage by three glasses of water, each containing thirty grains of soda bicarbonate, and a mustard plaster over the stomach. The diet is largely restricted to carbohydrates and, if necessary, the Murphy drip may be employed. The reaction following injections of acriflavin or mercurochrome is too dangerous to permit of their use. Blood transfusions every forty-eight hours on five or six occasions were very beneficial. Bimanual examination is seldom necessary.

ACUTE SALPINGITIS—774 cases, nearly all discharged without operation. The symptoms, bilateral pain, tenderness, and increased lochia, were alleviated by the Fowler position, regulation of the bowels, ice bag on the abdomen, and morphin when needed. Vaginal douches are never given. These patients are kept in bed until the temperature has been normal for one week, and on discharge are given a bimanual examination. They are directed as to their diet, regulation of the bowels, are warned against immediate sexual life and automobile rides, and are advised to remain in bed during menstruation. The disease is explained to them to gain coöperation.

CHRONIC SALPINGITIS—1,235 cases, 573 operated (46.32 per cent). Much pathology may occur over many years without discomfort, and the type of operation performed depends upon the age, social condition, extent of damage, and symptoms. Patients must have a normal temperature for three weeks before operation and a normal leukocyte count. If total ablation is distressing to the patient, it is often better to do a conservative operation, chancing the need for a secondary one later. Of the 573 operated upon only eighteen had drainage.

ECTOPIC PREGNANCY—189 cases, with a mortality of 9. The diagnosis is always interesting, and 16 per cent are incorrectly diagnosed. If after a most careful history there is still doubt, operation should be done. Treatment may be modified by blood transfusions.

CERVIX UTERI—While it was formerly thought that all scar tissue must be removed, the lacerated, everted, or cystic cervix may be cured in a few treatments, for which no anesthetic is necessary. Certain cases demand trachelorrhaphy; others, amputation.

FIBROIDS—346 operated upon. Many fibroid tumors are symptomless and need no treatment unless there is bleeding or pressure. These should be operated upon, unless there is some definite contraindication, then radium and x-ray must be employed. Myomectomy is preferred when possible in the young. Complete hysterectomy is preferred to the supracervical operation, since in the latter there is more hemorrhage, more sepsis, and greater chance for a subsequent malignancy.

CARCINOMA—429 cases, many terminal. A diagnostic curettage should never be performed unless radium is at hand. Nonsurgical treatment is preferable in carcinoma of the cervix, better results being obtained through the use of radium and the x-ray. Of the total number of operations done during the five years above mentioned, 20.4 per cent were hysterectomies. There was a death rate of 3.0 per cent in operated cases and 2.25 per cent in nonoperated, and 6.51 per cent had infected wounds. While in 1855 a hospital was built in New York for the purpose of curing vesicovaginal fistulæ, in 1925 there were only nine of these cases admitted to Bellevue. Treatment has improved. The director of such a service as that at Bellevue must

first of all obtain a thorough study of each case, then he must teach his associates and resident staff, then prepare the undergraduate students to examine and diagnose. It is not necessary to take up time teaching undergraduate students the technic of operations, but they should be taught to diagnose conditions.

Conclusions—Gynecologic operations are frequently done without sufficient preoperative study. The curet is used too often. The treatment of sepsis requires individualization, good nursing, regulation of the gastro-intestinal tract, and blood transfusion. Acute salpingitis rarely requires operation; for chronic salpingitis the operation must be decided upon after consultation with the patient. The use of the cautery on the cervix decreases the number of operations. Radium is the method of choice for carcinoma of the cervix.

Sir Ewen MacLean, of the University of Wales, said that his impressions of his rapid journey through the United States were at present much the same as those of the Irishman who said, after his train had whisked him past a field of potatoes, a field of green cabbages, a field of beans, and a lake, that he had seen an Irish stew. Boston asks "What do you know?" New York queries, "What are you worth?" Philadelphia demands, "Who are you?"

He is convinced that gynecology as such is not prospering as it should in the hands of the general surgeon, and believes that for its fuller development obstetrics and gynecology should be combined. The relation of the cervix to morbidity, as expressed by Dr. Goodall, is significant. The delightful conservatism of Dr. Holden is a great surprise, but time is insufficient to discuss his paper. Nothing is so important as the abundance of good will between this country and England.

Dr. Edward A. Schumann said that few would question the accuracy of Dr. Goodall's paper, and he believes that the first prophylactic measure in the case of endocervicitis is the restraint of intervention during delivery, allowing nature to accomplish slow dilatation without interference. When lacerations occur during childbirth, they should be repaired, preferably at once, but at least during the first week of the puerperium. He agrees with Dr. Holden in all his major premises, and commends his low operative incidence, but thinks that the cases should be studied before admission to a hospital (this is impossible, of course, in the city hospitals) thereby saving an economic loss. He does not pack abortions unless there is hemorrhage. He believes that a follow-up of the acute salpingitis cases would show that those apparently cured do not remain cured, but later come to operation. He believes in the supravaginal hysterectomy.

Dr. William R. Nicholson felt unable to discuss Dr. Goodall's paper since it is "new stuff" and must be so handled. He does not like the broadening of intrinsic infection, and thinks it safer for the public to have a physician who feels that almost all sepsis is extrinsic. He will try the technic as outlined, but he would not trust his cases to a nurse for the mercurochrome injections. In regard to Dr. Holden's paper, he asked how he secures the donors for free patients. The use of radium in unskilled hands has done more harm than the benefits obtained by experts. He agrees that undergraduates should be trained in clinical diagnosis and not in operating.

Dr. John M. Fisher was glad to hear Dr. Holden emphasize the evil of dilatation and curettage in abortion except in cases of alarming hemorrhage. He also believes that infection of the cervix in the puerperium is responsible for many secondary morbidities, since 15 to 20 per cent of downward and backward displacements of the uterus follow normal confinements of primiparas, due to an infected cervix and resultant subinvolution. He thinks that it is hard to distinguish the edges of the tear accurately at delivery, and believes repair better ten to fourteen days postpartum. In endocervicitis, exsection of the lining membrane of the cervix must be done.

Dr. J. W. Kennedy said that Dr. Joseph Price, noting the greater incidence of morbidity in the multipara than the primipara said that in every case there should be a high stitch placed on each side, above the tear, in addition to the repair. This should be done at time of delivery. Infections are often intrinsic, and puerperal infections should be classed as a wound infection, viewing the whole birth canal as one great wound. It is possible to diagnose 98 per cent of ectopic pregnancies if a careful clinical history is taken and the low central distention over the pubis noted.

Dr. Charles Mazer believes that many incomplete abortion cases not curetted, bleed later and come up for operation, and would urge dilatation and curettage on every uninfected incomplete abortion. In infected abortions, the uterus must be emptied. Of 500 cases so treated, there was in ten years a mortality of 0.1 per cent, and the patients usually left the hospital the fifth day.

Dr. George W. Outerbridge believes in the dilatation and curettage of incomplete abortions when aseptic, since it shortens the hospitalization to four and a half days, and prevents a chronic subinvolution which may result through retention of organized secundæ in uncuretted cases.

Dr. R. C. Norris stressed the importance of endocervicitis, and urged treatment by cautery or removal of the lining membrane. So great is his faith in mercurochrome that he uses it alone for disinfection of the cervix. Endocervicitis should be treated early in the puerperium. Dr. Goodall's paper does not minimize the importance of aseptic technic, but aims to reduce the irreducible minimum.

Dr. Geo. M. Boyd was surprised by the results claimed for the treatment of mild infections of the puerperium as given. He commended Dr. Schumann on his plea to avoid the surgery of obstetrics and believes with Dr. Holden that, because of the difficulty of accurate diagnosis of fibroid tumors, x-ray and radium are not the methods of choice.

Dr. John A. McGlinn for twenty-five years has always curetted the aseptic incomplete abortion, using placental forceps and dull curet. He does not believe in packing the vagina and thus prolonging convalescence. Dr. Goodall has brought a great message. No patient should come to pregnancy with an infected cervix.

Dr. Goodall, in closing, said that the treatment with mercurochrome injections cares only for those cases where the vagina is the harbinger of organisms that are not embedded; it can have no effect on chronic endocervicitis dormant in the tissues.

Dr. Holden stated that at Bellevue, if there is no other means, the city pays for the blood transfusion. Curettage in the hands of the capable is a good thing, perhaps, but much harm has been done by improper curettage, nor is it possible to tell when virulent organisms are present in the uterus It is his aim to discharge all postpartum cases in good condition—with a firm abdominal wall (prescribed exercise), the uterus in normal position, a good pelvic floor, and the cervix in as good condition as possible, cauterizing the endocervix, when indicated, any time from the eighth to the twelfth week.

December 8, 1926

ARMY NIGHT

Major General M. W. Ireland, Surgeon General, U. S. Army: Professional practice in the Army differs from civil practice because there must be met problems of mobilization, combat, and military occupation of foreign countries. Because of the breadth of its scope, Army medicine has greatly helped the advance of medicine in America. Many valuable discoveries have been made.

There has been medical service in the Army since the Revolution, the position of Surgeon General being created in 1818. During the Civil War field organization was developed—the foundation of sanitary service for all armies of the world. In Sternberg, the Army had a pioneer bacteriologist, and after the Spanish-American War, when yellow fever was successfully combated, Cuba, Porto Rico, the Panama Canal, and the Occident were freed from one of their greatest scourges. Hookworm disease was successfully treated, and when the cause of typhoid fever was discovered the Army inaugurated a progressive campaign against it, mandatory immunization being adopted in the U. S. Army in 1911. In the World War, despite the fearful conditions in France, there were only two thousand cases of typhoid, with only two hundred deaths. In the Philippines the emetin treatment for intestinal parasites was evolved, salvarsan was found beneficial in yaws, polished rice was determined to be the cause of beriberi, and there has been a distinct advance in malaria control.

Much literature has come from the pens of Army medical men, and the library of the Surgeon General's office contains the largest collection of medical works in the world. Here there is also a great museum. Eventually all medical units—the Walter Reed Hospital, the Medical, Dental and Veterinary Schools, and the Museum will be brought into proximity. Lately there has been extensive research on the transmission of dengue. The Army has made vast contributions to medicine, surgery, and public health. No longer is it out of contact with civil medical proceedings.

Colonel Henry C. Fisher, M.C., Commandant Army Medical School: Objects of the Army Medical School.—The objects of the Army Medical School are three: (1) for instruction and training of officers in professional and technical subjects relating to medicine; (2) for investigation and research; (3) for the production of medical supplies for the Army and other departments of the U. S. Government. While the medical school is primarily for the training of men of the Regular Army, it is also for the Reserve Army and for officers from neighboring countries. There are basic courses: five months' instruction for new medical officers—including clinical medicine and neuropsychiatry, clinical surgery, clinical pathology, and preventive medicine (including parasitic diseases), sanitary engineering, ophthalmology, otorhinolaryngology, and roentgenology—and there are advanced courses in preventive medicine and the x-ray. In time of war there are intensive courses for medical officers. The veterinary and dental students take their laboratory and x-ray work in the medical school.

The development of an Army Medical Center for coöperation is becoming an accomplished fact, under the instructions of the Surgeon General. Every physician is given a six-months' course every five years in order to keep abreast of the newer methods of treatment and medical advance. The newer surgical treatment is taught likewise, for in the Army every physician must do some surgery. The Army furnishes a wealth of material for research and special instruction in all branches. Technicians' courses are also offered, and a course in pharmacy is needed. The laboratory has been doing research work since its beginning, and besides its accomplishments, has enormous possibilities. Special investigations are being constantly made, the Wassermann has been standardized, the Kahn test has been adopted, vaccines have been standardized, as have supplies, and chlorin gas in respiratory disease has been investigated. The central laboratory acts as a mother laboratory to the service branches, and thereby improves their policies and technic. It is responsible for the routine examination of specimens from troops, and over twenty million ampoules of typhoid vaccine alone, have been produced. During wars, serums must be made for grouping, vaccines must be on hand, cultures of pathogenic organisms must be maintained, and tuberculin, and other veterinary serums and antigens must also be supplied. The school is the soul of the Medical Corps. Its organization is systematized, its ideals high. Its certificate is not easily obtained. It is a vivifying, energizing influence, stimulating *esprit de corps,* developing character, and inculcating devotion to service.

Lieutenant Colonel J. F. Siler, M.C., Assistant to the Surgeon General: The Medical Department Research Board—Transmission of Dengue Fever.—It has been the purpose of the Research Board in the Philippine Islands to investigate problems, the solution of which would benefit the Army and humanity. The board was organized in 1922 and went to the Philippines in 1923. The investigation of dengue fever has been carried out along the following lines: (1) epidemiology, (2) clinical manifestations, (3) etiology, (4) immunology, and (5) transmission by insects. All phases are now completed except the etiology, which is still being studied. Results were published in the *Philippine Journal of Science* seven months ago.

Dengue fever should be of especial interest to the profession of Philadelphia, since Benjamin Rush in 1780 published a clear-cut account of a case. In July and August of that year the weather was very warm and a mild remittent fever was prevalent. Mosquitoes were very numerous that autumn, and many hundreds of people became afflicted with lassitude or a remittent fever. The cases presented rigor, rarely fits, slight soreness of the throat, hoarseness, giddiness, and some coma and delirium. There was occipital pain and pain in the back and hips, or the neck and arms were sore. The flesh was sore at the sites of pain, and it was commonly called "break bone" fever. A rash occurred the third or fourth day, with burning of the palms and soles, and during convalescence the patient experienced a bitter taste, a yellow tongue, nausea, anorexia, faintness, weakness of the knees, and dejection. In 1922 and 1923 there was an epidemic in South Texas and along the Mexican border, and all the southern United States to the Atlantic seaboard.

In the Philippines this disease presents a serious problem, since forty per cent of the troops contract it within a year of their arrival, and it exceeds all other causes of hospitalization except, occasionally, venereal disease. When the experiment began, nothing was known of the etiology, though now we know at least that it is a filtrable virus. It was known that it was transmitted by the yellow-fever mosquito, but the common house mosquito was held in doubt. Does the virus have a developmental period in the mosquito? Are there stages in which the patient is open to infection? How long can the mosquito retain the capacity for in-

fecting with the virus? Can the mosquito pass the virus through the eggs?

The work was done with volunteers, and malaria had to be excluded. Mosquitoes were typed, bred, stowed, and handled scientifically, all raised from eggs and controlled. To confirm the transmission by the Aëdes sixty-five volunteers were used, and dengue fever was produced experimentally in forty-seven. By experiment it was proved that there is a developmental period in the mosquito of about eleven days, and it was also determined that the patient is infective to the mosquito during late incubation and early in the disease—up to the third day. Once a mosquito is infected it holds its infectivity for life—from sixty-two to seventy-five days—but it was not possible to pass the virus from one generation to another through the eggs. The Culex, or house mosquito, does not carry the disease. The incubation period in man was found to be usually four to seven days, the temperature symptom being used. When passed through six generations of mosquitoes, there was found to be no change in the virus. The disease has been produced by the bites of two mosquitoes—never yet by one.

Major G. I. Jones, M.C., Assistant to the Surgeon General: The Medical Department Reserves.—Since the Reserve Corps belongs to the medical profession, physicians know of the work being carried on for the defense of the country. No argument for the justification of preparedness is necessary, since it now costs the Government $366,000,000 for the Army and $500,000,000 for veterans of the World War. Had we spent more before, we might have been spared this money to the veterans. The medical profession has always answered unstintingly, but there has been demoralization following the war. In 1917 we were unprepared, qualifications could not be considered and the need then was for doctors to serve the troops.

Now a wise provision has been made for a reserve corps with training in time of peace. Eleven thousand officers are now enrolled, one third the required number. We have at present enough men for the first six months of any war. While there is a natural impluse to make rapid strides, the foundation must be built strongly, and two decades will be necessary for its development. The three components of the consolidated Army are the Regular Army, the National Guard, and the Reserve Corps. In 1925 two thousand medical-department reserve officers were trained, but there must be more voluntary inactive military-duty training, with large-unit organizations in hosiptals. It is proposed after this year to have the camp at Carlisle for individuals only in June, and for units in July.

MARY A. HIPPLE, M.D., Reporter.

SCHUYLKILL—DECEMBER

The annual meeting of the Schuylkill County Medical Society was held at the Schuylkill County Country Club, Pottsville, December 7. Dr. H. W. Albertson, president of the State Medical Society, spoke of what can be accomplished by coöperation; the efforts that are being made to build up the medical endowment fund; creating interest in the JOURNAL of our State Society, and the work that is being done to merge the journal interests of our adjoining States into one publication; the erection of a permanent home at Harrisburg; and urging vigorous support of the Medical Benevolence Fund.

Dr. A. C. Morgan, president-elect of the State Medical Society, referred to the Workmen's Compensation Act; a One Board Bill, to constitute the new Medical Practice Act; and to the necessity of the county medical societies giving full support to public-health legislation.

Dr. Arthur B. Fleming of Tamaqua, the secretary of the county society, was presented with a parlor clock.

Drs. Christian Gruhler and J. S. Callen, Shenandoah, also spoke.

WARREN—DECEMBER

Twenty members were in attendance at the December meeting, which was held at the Philomel Club House on the 20th.

Dr. Elizabeth S. Beaty reported on some recent developments concerning scarlatina. The difficulty that has always presented itself in diagnosis is as great as ever. The causative agency is probably a specific type of hemolytic streptococcus. That it is not the ordinary type is evidenced by the fact that a hemolytic streptococcus is widespread and produces no immunity. Specific vaccines seem to have some curative and immunizing value. The toxins elaborated are similar in their nature to the diphtheria toxins. The Dick toxin is valuable in a definite number of cases.

Dr. Beaty also referred to the treatment of pernicious anemia by low-fat diets, hydrochloric acid, and large amounts of proteins and of liver, as reported by Drs. Minot and Barker.

In the discussion which followed, the opinion was expressed that the desquamation of scarlet fever is not responsible for the contagion, and that while the early ear discharge might carry the causative agent, the chronic discharge which often persists for years contains organisms that apparently do not convey the disease. Scarlatina may occur a second or third time in the same person, and several cases were cited of such recurrences.

Dr. Briggs reported a recovery from what seemed to be a case of lateral-sinus thrombosis in which high fever, chills, septic arthritis, and meningeal symptoms were developed, and which subsided without operation. The mastoid on the opposite side had been infected eight months before, and had been operated on with good results. In the present illness the other ear, which had been the seat of several attacks of suppurative otitis in early childhood, began to discharge without causing any apparent involvement of the mastoid cells. Then all the symptoms of sigmoid-sinus involvement appeared—chills and a temperature of 106° with marked remissions, and swelling about the jugular vein. Operation was decided against, as the patient seemed moribund, but recovery set in after a week or two. The patient was a child twelve years old, whose parents had both died of pulmonary tuberculosis, florid in type. The possibility of a tuberculous infection had to be borne in mind.

A similar case occurred at the hospital last year in a young girl following scarlatinal otitis. This patient is also recovering without operaton. The chills and peculiar fever indicate a possible sinus infection.

Dr. Robertson reported on the chemical exenteration of tumors, injections of chlorid of lime—with or without excision—as practiced by him for a number of years, being apparently more successful in malignancy than simple excision. An axillary tumor in a man so treated was reported. The tumor seemed to follow a traumatism to a nerve.

Drs. Durham, Shortt, Schmehl, and Schuler acted as hosts at dinner.

M. V. BALL, M.D., Reporter.

The Woman's Auxiliary of the Medical Society of the State of Pennsylvania

MRS. SAMUEL BOLTON, *Editor*
4701 Leiper Street, Philadelphia, Pa.

COUNTY AUXILIARY REPORTS

ALLEGHENY

The Woman's Auxiliary of Allegheny County began its fall activities with a luncheon in the Blue Room of the William Penn Hotel. Mrs. John F. McCullough presided, making each member feel she was a vital part of the organization. The flowers on the speakers' table were placed in the form of a horseshoe, emblematic of good luck for the coming year.

Mrs. Johnston, our State president, proposed a toast, using the horseshoe as her subject. Dr. H. G. Schleiter gave an interesting talk on "The Chief Health Menace of Middle Age." Mrs. C. H. Smith, vice-president, of Uniontown, gave a word of greeting.

Mrs. B. Z. Cashman, accompanied by Mrs. G. McKee, sang two groups of songs. Mrs. A. W. Sherrill gave a reading. The luncheon was a happy thought of the hospitality committee, Mrs. J. V. Grahek, chairman.

MRS. D. B. LUDWIG, Reporter.

LEHIGH

The Lehigh County Auxiliary held its annual luncheon and meeting at the Hotel Traylor, November 16, with sixty members in attendance. They were much interested in a talk by the State president.

Mrs. J. Newton Hunsberger, who outlined the work to be carried out during the ensuing year, stressed the social activities of the various auxiliaries and urged hearty coöperation with the State organization in all affairs.

The tables at the luncheon were decorated with autumn flowers donated by the president, Mrs. Gangewere.

The Montour County president, Mrs. Schultz of Danville, was the guest of the auxiliary. The members' guests were entertained at bridge and five hundred after the luncheon. A musical was given at the home of Mrs. F. A. Fetherolf, to which the husbands and two guests were invited. A very interesting program was given, followed by refreshments.

MRS. V. J. GANGEWERE, Reporter.

LYCOMING

The fall meeting of the Woman's Auxiliary of Lycoming County Medical Society was held at the Lycoming Hotel, November 12, the president, Mrs. Kenneth Wood, presiding. Plans were discussed as to how interest in the organization might be stimulated, also in what way the organization could be helpful to the doctors, the hospital, and the community.

The president urged all present to foster interest in subscriptions to *Hygeia*. A committee was appointed to promote further the introduction of this journal to the Parents and Teachers' Association of the county.

It was decided to hold a social meeting in the form of a bridge tea.

MRS. ERNEST T. WILLIAMS, Reporter.

PHILADELPHIA

The regular meeting of the Woman's Auxiliary of the Philadelphia County Medical Society was held in the home of the Society, on November 17th. Immediately preceding this meeting, the officers of the Auxiliary held a reception for the members, which was well attended.

Dr. John D. McLean made an address on "The Doctor of Medicine, Past, Present, and Future." Following this, a business session was held, when the standing committees made their reports. Mrs. B. F. Kehler, Chairman of Membership, reported twenty-five new members.

Mrs. John C. McReynolds, President-elect of the Americal Medical Auxiliary, has offered several prizes to be awarded to the auxiliaries obtaining the largest number of subscriptions to *Hygeia* in proportion to their membership.

A very delightful feature of the program was Miss Helen Goddard's rendition of several selections on the piano from Chopin, Grieg, and McDowell. At the conclusion, tea was served in the grill.

MRS. GEORGE A. KNOWLES, Reporter.

WESTMORELAND

The Woman's Auxiliary of the Westmoreland County Medical Society had a delightful afternoon October 6th, at the Latrobe Country Club, the Latrobe members acting as hostesses. Luncheon was followed by a brief business meeting. The remainder of the afternoon was devoted to bridge.

The following new members were received: Mrs. W. S. Bell, Mrs. A. B. Blackburn, Mrs. A. R. Megahan, Mrs. P. S. Pile, Mrs. J. A. Blackburn, Mrs. C. C. Porter, and Mrs. J. S. Wilson, of Greensburg.

Mrs. Bortz, Mrs. C. D. Ambrose, and Mrs. H. B. Barclay will entertain the next meeting, November 2d.

MRS. P. G. MCKELVEY, Reporter.

NIP JEALOUSY IN CHILDHOOD

What starts the growth of jealousy in children? What can parents do to prevent the development of this ugly trait that will distort the entire future life of the child? What is jealousy?

"Once jealousy has become embedded in a child, it can never be completely eliminated," says Dr. Frank Howard Richardson, in the December issue of *Children*. Jealousy is a misdirected, perverted form of self-love. And self-love is an indispensable constituent of every human being. Self-love or self-esteem, normally developed, is the basic ingredient of self-respect, ambition, desire to do well in the world and to be well thought of. Distorted, it becomes that ugly, unhappy trait, jealousy.

"Jealousy may be fostered in a child by the obvious favoritism of the parents for a brother or sister. Such discriminations are found to have far-reaching and devastating effects. Consider the common parental practice of holding before a laggard child the successes of a model brother or sister. Pitting a brilliantly endowed child against a normal one of the same age, or a naturally bright younger child against a retarded older child is a bit of refined cruelty. A more subtle cause for the development of jealousy is society's preference for the brighter or more attractive brother or sister. Teachers, fellow pupils, and playmates are bound to prefer him. When this occurs, watchful parents may do a great deal to neutralize it by emphasizing the few admirable traits possessed by the less favored one. Home praise can do wonders in correcting the world's judgments."

THE

MEDICAL SOCIETY OF DELAWARE

THE ANNUAL SESSION

The 137th annual session of the Medical Society of Delaware was held in the New Century Club at Dover, October 12 and 13, 1926.

Transactions of the House of Delegates meeting which preceded the opening session of the Society were published in the December number of the ATLANTIC MEDICAL JOURNAL.

REPORT OF THE GENERAL MEETINGS

The Society was called to order by the president, Dr. J. B. Derrickson, and the Reverend Mr. Taylor led in prayer:

Almighty God, our Heavenly Father: We thank Thee that we have this privilege of coming before Thee on another day. We thank Thee for life and health, and we would ask Thee to let Thy blessing rest upon these Thy messengers who go forth in their daily walk of life, dispensing not only the good, but those things that try to bring back life and health. Bless them as they go back to their several fields. Bless the means that they put forth to help humanity in the struggle for life, and may they realize the responsibility that rests upon them. May the papers that are read and the discussions that follow be for the benefit of the profession, and may everything that is done be done to Thy honor and Thy glory. We ask it for Christ's sake. Amen.

The address of welcome was delivered by Mr. Shank, of Dover, Delaware:

Gentlemen: I assure you it was with the deepest regret that His Honor, the Mayor, was not able to be with you this morning to extend the glad hand of welcome to Dover. He has unwisely delegated me to perform this task, and I assure you it is like sending a boy to a man's-size job. To greet such an illustrious body of men as they should be greeted and to try to show you how glad Dover is to have you hold this convention here is quite a task.

I have never understood why the doctors of medicine have not been accorded their rightful place in the hall of fame with their names inscribed in letters of gold. No profession has ever attained so nearly to the highest ideals of humanity. There has never been a vocation, to my knowledge, that has exacted such sacrifices and deprivations as that of medicine. You are called out at all hours of the night and day; you have practically not an hour that you can call your own—and all to minister to the suffering and to try to save the dying. You are companions through life. You have seen those who have everything the world has to give, and who yet would gladly give their all if you could extend their lease on life. In no other vocation have men been called upon to make the sacrifices that you have made.

Your advances in the medical world have reached such importance that they compare favorably with the miracles of Christ, and it has all been accomplished by your unending sacrifice of time and pleasure.

I have no doubt you will receive your reward some day, but you should receive some of it while you are still among us, and therefore I consider it quite an honor and certainly a great pleasure to be delegated by the Mayor and Council, as well as the citizens of Dover, to convey to you their welcome and best wishes for a most successful meeting, and to invite you to return to Dover for future meetings.

The annual address of the president was then delivered (published elsewhere in this issue).

The report of the House of Delegates was presented, and duly approved by the Society.

Dr. P. W. Tomlinson said he was informed that Dr. James T. Masson had passed away, and that a formal report would be sent in later.

Dr. Lewis nominated for president one whom he thought would do honor to the Society, who had honored his own name, his city, county, and state—Dr. Harold L. Springer, who was unanimously elected.

Dr. Springer: I wish to voice my appreciation of the honor conferred upon me, and especially of the very kind words of Dr. Lewis. He deserves great credit for saying those things, knowing me as well as he does. I will make every effort to serve the Society as well as I can, and hope that next year we shall be able to give you a specially good meeting at Farnhurst. I want to insist upon everybody coming, in order to make the meetings as interesting as possible and to show our appreciation to the Farnhurst people. They have been especially good to the State Society. I shall insist also that every committee, except the Committee on Necrology, have a report next year.

The following papers were read during the two scientific sessions:

1. Case Report—Pylorospasm. By Dr. Joseph Bringhurst, Felton. Discussion opened by Dr. Oliver V. James, Milford.

2. Ocular Fields in Syphilis (lantern slides). By Dr. William F. Bonner, Wilmington. Discussion opened by Dr. E. R. Mayerberg, Wilmington.

3. Diphtheria Prevention. By Dr. C. A. Sargent, Dover. Discussion opened by Dr. A. T. Davis, Dover.

4. Sanatorium Treatment for Pulmonary Tuberculosis. By Dr. S. H. Hurdle, Brandywine Sanatorium. Discussion opened by Dr. A. T. Davis, Dover.

5. Some Points to be Remembered in the Diagnosis of Tuberculosis. By Dr. L. D. Phillips, Dover. Discussion opened by Dr. Albert Robin, Wilmington.

6. Address by Dr. Wendell C. Phillips, President of the American Medical Association.

7. Recreation for a Restless Age. By Eugene T. Lies, Chicago.

8. Contraceptive Methods of Choice. By Dr. Hannah M. Stone, New York City.

9. Fallacies of Birth Control. By F. L. Hoffman, Ph.D., Consulting Statistician of the Prudential Life Insurance Company, Newark, N. J.

10. The Prevention of Maternal and Infant Mortality. By Dr. S. Josephine Baker, New York City.

These papers will appear in subsequent issues of this JOURNAL.

Dinner on the evening of October 12th and luncheon on October 13th were served in the New Century Club, when the members of the Society were guests of the Kent County Medical Society.

The meetings were well attended, and the discussions were fuller and more animated than usual. It was the consensus of opinion that the meetings were more than ordinarily pleasant and profitable. The usual social side lights were not neglected.

At the concluding session a rising vote of thanks was tendered the Kent County Medical Society for its kind hospitality.

The next session of the Society will be held at Farnhurst, Delaware, the second Tuesday and Wednesday in October, 1927.

THE PROGRESS OF MEDICINE*

J. B. DERRICKSON, M.D.
FREDERICA, DEL.

To be permitted to speak to one of the oldest and more progressive societies of this country on this, the 137th anniversary, is a very great privilege. I have memories of more than 27 years' association with the Society, and the honor of being elected your president is deeply appreciated.

We are living in the golden age of medicine. We have lived to see the great scourges and plagues wiped out. We have witnessed the discovery of most of the infectious diseases. We no longer have many thousands of people dying every year of typhoid fever—its mortality rate has dropped 72 per cent in the last year. Tuberculosis has been so greatly reduced that the death rate has decreased more than 50 per cent. We have added something like 15 years to the span of life in the last few decades, so that now the average span of life is 55 years; yet still this is not enough.

It appears particularly appropriate to speak of the progress of medicine where for years the clinical and laboratory divisions have worked together for the greatest benefit of the patient and the advancement of medical knowledge—that is, for the good of the future patient. The only purpose of medicine is to decrease human suffering by preventing or curing disease; but this end cannot be reached except through a scientific understanding of the functions of the organism when they are modified by pathogenic factors. Today, medicine consists of an immense accumulation of observations, partly empirical and partly classified according to scientific methods. It is a science in the making. While the treatment of certain diseases (for instance, the disturbances of the pancreas and the thyroid gland) is thoroughly scientific, the handling of others (such as mental diseases) is still empirical. It is obvious that the progress of medicine is conjoined with the development of the sciences concerned with living matter and living organisms. Physiology, which was in its infancy when physics and chemistry were widely developed, cannot as yet supply to medicine the information necessary for scientific study of the problems in every part of its field.

As the physician must help patients affected with all kinds of diseases, he cannot always remain in the territory which has been scientifically explored. Therefore, his task is very much more difficult than that of the physiologist, who can select his problem, reduce it to its simpler terms, and solve it by technic accurately adapted to the subject of his experiments. The physician, on the contrary, must wander through the entire field of medicine and often meet with diseases due to unknown causes and developing within an organism of unknown resistance. He is helped by his scientific knowledge so far as it goes, but when he has reached its limit, he has to guess.

The past fifty years have been a period of triumph for medicine because the revelation of Pasteur of the rôle of microörganisms in disease has led to the creation of bacteriology and immunology. These sciences have brought about in a spectacular way the conquest of infectious diseases—a fact of momentous importance to humanity. The death rate of the population of the civilized countries has been decreased by better hygiene and protection against cholera, plague, yellow fever, typhoid fever, and tuberculosis. Not only has preventive medicine produced an improvement in the quality of human beings, but it has permitted a profound modification of their mode of living. People are crowded into large cities, and into factories where they work as part of the machinery, without danger of great epidemics and without impairment of health. Immense armies which heretofore would have been rapidly reduced in size by infectious diseases are kept in the field for years without great spontaneous losses. The admirable work of Gorgas in Panama has inaugurated a new era in the history of mankind. Life in the tropics has been rendered possible for the white man, who has thus acquired the power to dominate the entire world. While the ultimate significance of Pasteur's discoveries cannot be foreseen, it is certain that medicine, in protecting people from infectious diseases, has already accomplished miraculous progress.

But we may doubt whether this victory has so far brought much happiness to the world.

*Presidential address delivered before the Medical Society of Delaware, Dover, Delaware, October 13, 1926.

Has it greatly modified the position of the average man as regards disease and death? Probably not, although the adult individual has much less chance of dying from smallpox, cholera, typhoid fever, and tuberculosis than fifty years ago. His expectation of reaching the age of 80, however, has not markedly increased, and he surely has more prospect of being tortured by some form of cancer, afflicted with slow disease of the kidneys, the circulatory apparatus, or the endocrine glands, or of becoming insane or making himself miserable by his lack of judgment and his vices. Modern medicine protects him against infections which kill rapidly, but leaves him exposed to the slower and more cruel diseases and to mental deterioration. There is no great hope of improvement in this situation, in spite of the remarkable advances which have recently been made in physiology by the discovery of the active principles secreted by the endocrine glands, by the building up of the science of nutrition, and by a better conception of respiration, of metabolism, of the acid-base equilibrium of the blood, etc.

Although great progress has been made in the treatment of diabetes and of disturbances of the thyroid gland, it is far from possible to cure these diseases or to prevent their occurrence, as we are still absolutely ignorant of their causation. The insufficiency of medicine is more manifest in dealing with tumors. What are the determining factors in cancer? What is its nature? What are the causes that render the human organism susceptible to malignant tumors? No one today can give a scientific answer to these questions. We do not know what brings about arterial hypotension. Our ignorance of the causes of chronic nephritis and most of the diseases of the circulatory apparatus is practically complete. It is possible neither to cure nor to prevent them. Our lack of knowledge is still greater in the field of the nervous and chiefly of the mental diseases, whose nature remains almost as mysterious as it was during the middle ages. It is clear that the future progress of medicine must consist in finding the nature and causation of some of these diseases and a method of prevention. Medicine should attempt to bring people to extreme old age without suffering, and also to increase their moral and intellectual value, because the quality of the individuals who make up the community is far more important to progress than their number. To expect this from medicine does not appear to be asking the impossible, in view of what has already been accomplished. If our civilization does not crumble and if scientific research goes on at increased speed, we can reasonably believe that this expectation will be fulfilled.

If physiology were studied as a pure science far from hospitals and medical schools by men possessing the creative imagination and spirit of the discoverer of the fundamental principles of physics and chemistry, the secrets of the functions of the body that we still lack would be brought to light. Our knowledge of cerebral physiology is in the embryonic stage. We are still entirely ignorant of the properties of nerve cells, the nature of nervous energy, and the significance of telepathic phenomena. No one comprehends the nature of the connection between the brain cells and memory, intelligence, courage, judgment, and imagination. The knowledge of the conditions that bring about the evolution or the disappearance of these characteristics in a race, family, or individual would bring the human race far more happiness than the complete eradication of plague, cholera, and typhus from the earth. At the same time, the discovery of some of the fundamental properties of nerve tissue would enable medicine to prevent many of the nervous and mental diseases. It is obvious that the functions of the brain must be better understood in order that man may survive, without intellectual or moral deterioration, the new conditions of life imposed on the individual by modern civilization. The spiritual progress of man could be promoted by a scientific knowledge of the physicochemical phenomena which take place within the brain cells. Instead of merely increasing the number of human beings, we could improve their quality.

Thus understood, the progress of medicine would be the most important factor in the development of civilization. Three quarters of a century ago, so-called chronic diseases occasioned only one sixteenth of the deaths. The other fifteen sixteenths were mostly from infections. Now, on account of the great curtailment and prevention of infection, chronic diseases constitute about one half. The saving of infants has greatly increased the total span of life. The present infant-mortality rate in the United States is 76 per 1,000, which is a reduction in six years of 24 per cent. The decrease in intestinal diseases of childhood is 33 per cent, while the reduction in pneumonia and respiratory diseases is about one fifth. This shows what education, sanitation, and hygiene can accomplish. Economic conditions have a great deal to do with mortality. The infant death rate is three times as great among the poor as among those whose income, roughly speaking, is three times as large.

But we have not done enough for the middle-

aged. Their mortality rate is just as high, and the degenerative diseases are the ones we must now battle with. What of Bright's disease and the heart affections? What of the nephritides and the cirrhoses? What of the pneumonias? These afflictions now destroy more lives than all other types of morbidity, although eradication of focal infections will go far toward preventing many of them. It remains for us to apply our knowledge in support of a method whereby the man of middle life may be overhauled, his infirmities anticipated, and his incipient diseases recognized, to the end that he may not only live out the anticipated span of life but enjoy life to a good old age. We have ignored the tremendous importance of the periodic and thorough physical examination, so the slogan has been adopted: "Have a thorough medical examination on your birthday."

It is surprising the lack of attention we give our bodies and the little intelligence we sometimes display in choosing persons to care for the delicate machinery of this most wonderful of all mechanisms, the human body, which is the temple of the immortal soul. What would you think of a man who would entrust the intricate engine of a motor car to a person who would profess to remedy anything that was wrong with it by rubbing the outside? Yet people who profess to be intelligent (and who really are in other decisions in life) will sometimes leave the treatment of their bodies to most incompetent individuals who make great pretenses and propose to cure the most complicated diseases by adjusting the spine, rubbing on the outside, or reading out of a book and telling people that the disease from which they are suffering and dying does not exist! Isn't that a terrible thing to do for a little child who is strangling from the diseased membranes that clog the throat in diphtheria? It is a hard thing to try to enlighten distressed though misguided parents in the agony of their sorrow, and tell them that untruth and dogma allowed their child to die when intelligent, prompt, scientific administration of antitoxin would have saved its life. It would be criminal, were it not due to ignorance, for anybody to attempt to give so-called spinal adjustments (but which really never did, never can, and never will adjust anything) for a ruptured appendix or a tumor on the interior of the body that is fast becoming malignant.

The popularity of the healing cults, fads, and sects in human sickness is due to those of an unstable, impressionable nervous system who are always looking for some easy way of treatment, particularly if it is mysterious. They are unwilling to purchase health by rational means, but want some mystical or miraculous occult force to be invoked in their behalf.

The aversion to publicity in medicine is doubtless founded on the feeling that science needs no defense, yet it was said of Huxley and Darwin that they had to fight the battle of science with the public with one hand while they labored in the laboratory with the other. Progress is a series of battles. It is never won except by the repeated launching of offensives. It must ever be fought for, and with the cudgels of truth. The fight is not for the profession, but, after all, for humanity.

ORTHODONTIA*

RICHARD H. STUCKLEN, D.M.D.
WILMINGTON, DEL.

Orthodontia is that branch of dentistry which deals with the development of the dental arch as a whole. It has as its object the correction and prevention of deformities of the masticatory apparatus. These conditions are recognized where the maxillary and mandibular teeth come together in faulty relation to one another. This is called malocclusion. It is seen in many forms and degrees of severity, and is very prevalent—almost as much so as dental caries. In some cases there is a disharmony in the relation of the maxillary and mandibular teeth; one series being relatively anterior or posterior to its typical position. Then, too, one arch may be larger than the other, as in cleft palate and in acromegaly. In some cases we find faulty contact in local areas only, while in others there seems to be a general lack of development. In certain individuals, only the most posterior teeth come together, and a wide space is left between the maxillary and mandibular incisors.

Malocclusion does not affect human mortality as it does the wild animal in which the struggle for existence depends largely upon the use of the teeth. However, thorough mastication is still considered desirable for health. The teeth are also important in speech, for certain types of malocclusion have a serious effect on enunciation. Then too, the conspicuousness of malposed incisors is likely to prove a serious handicap to the individual, both socially and economically. It is patent, then, that malocclusion should be corrected, or better, prevented.

In order to do this, the etiology must be understood. The prevalence of crowded dental arches led some dentists to assert boldly that this was the result of inheritance of the large teeth of the father and the small jaws of the mother. Then the evolutionary tendency of the jaws to dimin-

*Read before the New Castle County Medical Society, Wilmington, Del., November 16, 1926.

ish in size was pointed out. This factor is of little consequence because comparative observations of carnivora showed that the number and size of the teeth decreased just as quickly as the jaws. A study of identical twins at the University of Pennsylvania last year included an investigation of this question of hereditary influence. Certain peculiarities which appeared on the right side of the denture of one twin showed up on the left of the other. That is, one appeared as the mirror image of the other. Besides, the general form and structure of their teeth was always very similar, due to their identical inheritance.

The method of development of the denture, whereby the tooth enamel grows to its full size very early, to be followed by muscle and bone growth, points to metabolism as a factor. Malocclusion has been produced experimentally on monkeys by vitamin-deficient diets. It has been found to have some relation to anemia, rickets, and other osseous defects. Apparently metabolism, especially calcium metabolism, is largely responsible for the development of the dental arch, as well as other bony parts of the body.

Malocclusion is not common in the deciduous teeth, but its beginning can often be traced to infancy. It is more common in the bottle-fed than in the breast-fed. The use of pacifiers, and such habits as thumb-sucking and lip-biting lead to its occurrence. Continued mouth-breathing is a pernicious influence. This habit may continue after removal of nasal obstructions, and must be broken in order to insure proper development of the dental arch and promotion of the general health. To do this, a shield, kept between the lips and teeth at night, will close off the orifice of the mouth, encouraging nasal breathing and reducing such glaring deformities as the typical adenoid face. Flabby muscles of mastication and expression are commonly seen, usually associated with other symptoms of feebleness of growth requiring general treatment. It is hardly necessary to mention that attention to matters of diet, sunshine, exercise, and rest are essential.

Lack of care of the deciduous teeth is a common cause of malocclusion. These teeth must be kept intact in order to maintain the arch for the permanent teeth, as well as to foster the habit of vigorous mastication. Soreness or loss of these teeth leads to the habit of bolting the food—a habit which often continues throughout life. Deciduous teeth are very susceptible to infection and the danger of focal infection is serious. Alveolar abscess, the gumboil of childhood, is altogether too common for the welfare of our youth. While such conditions prevail, the need for frequent thorough examination and treatment by the dentist, from the age of three on, cannot be overemphasized. Moreover, the first permanent molars, which erupt at six or seven, are often hopelessly broken down by caries in cases which could easily have been saved by early dental treatment. It is difficult for people to understand this need. As a result, many of these large, strong molars are lost, allowing the adjoining teeth to tip towards one another. This produces a marked disharmony and malocclusion leading to a susceptibility to pyorrhea later on.

Orthodontic treatment is usually applied by means of delicate wires on the teeth. These wires exert a limited amount of force through the teeth to the alveolar process. According to the laws of bone architecture, the process changes in response to the stress applied. Gentle pressure stimulates; intense pressure causes inflammation and resorption—conditions to be avoided. By means of delicate pressure, then, the alveolar process gradually changes form and the teeth approach the positions desired. Too much must not be expected, because sometimes the bone is defective to such a degree that it does not respond to stimulation. The muscles may lack the power to develop properly. They are continually exerting force which is dominant over the form of contiguous bone. Unless the muscles about the mouth function normally, the correct positions of the teeth will not be maintained.

Some orthodontists claim that treatment may be made to influence directly the form of more remote parts such as the chin, the nasal septum, the angle of the mandible, and the temporomandibular articulation. It seems, however, that these parts are influenced more indirectly by changed function and the natural forces of development. Thus, the use of a mandible which has been ankylosed will stimulate its growth, and the use of a nasal cavity which has been obstructed will help it develop properly. Naturally, the greatest changes can be made in early youth when the growth impulse is strongest.

A great deal can be done, although orthodontia has its limits. It is dependent upon the same fundamental biologic truths as other branches of medical science. In adherence to these principles, it is becoming recognized as an important type of health service.

COUNTY SOCIETIES

SUSSEX—NOVEMBER

The regular meeting was held at Hotel Rigbie, Laurel, on November 11th at 8 p. m. Due to the fact that it was Armistice night the attendance was small, but the following physicians were present: W. P. Orr, James Beebe, Richard Beebe, W. W. Hocker, Lewes; W. E. Douglas, Milton; G. V. Wood, Gumboro; James K. Hocker, Millville; H. M. Manning, Seaford; S. J.

Tilghman, Bridgeville; E. H. F. Farlow, W. T. Jones, J. R. Elliott, Laurel.

Dr. Olin Allen, of Wilmington, read a paper on heart pathology, and demonstrated with lantern slides the tracings made by the electrocardiograph in numerous heart lesions. A general discussion followed as to the treatment of cardiac cases, particularly on when digitalis is indicated.

After the scientific part of the program a luncheon was served.

The next meeting is to be held at Bridgeville on December 9th.

NEW CASTLE—NOVEMBER

The stated meeting was held at the University Club, Wilmington, on November 16, 1926. The program was as follows: (1) Clinical cases. (2) Paper on Orthodontia, illustrated with lantern slides, by Dr. R. H. Stucklen, Wilmington. (3) Explanation of the Podiatry Act of Delaware, by Mr. Walsh, chiropodist. (4) The Prevention of Puerperal Infections, by Dr. Barton Cooke Hirst, Philadelphia. Discussion by Drs. Willard Springer, John Palmer, William Wertenbaker, and Paul Smith.

The following names were submitted by the nominating committee for officers for 1927: President, Charles White; vice-president, Mark Holzman; secretary-treasurer, B. S. Vallett; censor, Willard Smith; director, Julian Adair; delegates, J. A. Ellegood, W. E. Bird, Ira Burns, William Kraemer, Eli Nichols, G. W. K. Forrest, William Speer, Paul Smith, I. W. Chipman, V. D. Washburn, A. Robin; alternates, W. V. Marshall, James Butler, L. J. Rigney, Charles Boehm, M. I. Samuel, C. A. Beck, Herman Miller, William Bonner, Earl Bell, E. H. Lenderman.

Dr. W. E. Bird read a resolution, which was approved, to the effect that the Society request the editors of our local press to refrain from using physicians' names in their daily publications in connection with patients, treatments, or operations, as this is repugnant to our well-known code of medical ethics.

Medical News

Deaths

FRANK W. GULICK, M.D., of Philadelphia; Jefferson Medical College, 1893; aged 61; December 18.

ROBERT S. DONEHOO, M.D., of Pittsburgh; University of Pittsburgh School of Medicine, 1893; aged 57; December 24.

CHARLES E. BINGAMAN, M.D., of Palmerton; Jefferson Medical College, 1910; aged 42; in November, of appendicitis.

GEORGE G. CLARK, M.D., of Philadelphia; New York University Medical College, 1880; retired; aged 73; December 12.

CHARLES H. SCHOCK, M.D., of Philadelphia; Medico-Chirurgical College of Philadelphia, 1887; aged 66; December 28, of heart disease.

JOHN D. MOORE, M.D., of Philadelphia; University of Pennsylvania School of Medicine, 1889; aged 61; November 5, of cerebral hemorrhage.

MICHAEL J. SKILLING, M.D., of Aldan; Jefferson Medical College, 1873; practiced in Philadelphia and vicinity 53 years; aged 77; December 21.

LIEUTENANT A. J. CLAYTON, son of Dr. Joshua Clayton, of Philadelphia, with three other aviators was hurled to death, December 22, while flying in a fog.

WILLIAM MCCRACKEN, M.D., of Pittsburgh; New York Homeopathic Medical College and Flower Hospital, 1891; aged 60; December 18, of cardiovascular-renal disease.

JOSEPH SCROGGS, M.D., of Beaver; University of Pennsylvania School of Medicine, 1877; at one time on the staff of the Dixmont Hospital for the Insane; aged 74; November 15.

FRANKLIN M. LAUBACH, M.D., of Allentown; Bellevue Hospital Medical College, New York, 1868; retired twenty-five years ago; aged 80; December 10, at the Sacred Heart Hospital, of apoplexy.

SAMUEL D. BAILEY, M.D., of Philipsburg; Jefferson Medical College, 1884; president of the Clearfield County Medical Society in 1899; aged 70; November 13, of carcinoma of the stomach.

HENRY M. CULLINAN, M.D., of Philadelphia (formerly of Brooklyn, N. Y.); University of Pennsylvania School of Medicine, 1903; December 7, killed by a heavy truck which mounted the sidewalk.

MICHAEL F. GALLAGHER, M.D., of Philadelphia; Hahnemann Medical College and Hospital of Philadelphia, 1903; former member of the staff of St. Joseph's Hospital; December 28, of pneumonia.

ELOISE MEEK, M.D., of Bellefonte; Woman's Medical College of Pennsylvania, 1899; medical missionary in India for two years; spent two years in Alaska in Government work; aged 51; December 20, at the Clearfield Hospital, following an operation.

MARY E. ALLEN, M.D., of Philadelphia; Woman's Medical College of Pennsylvania, 1876; former resident physician at Vassar College, and for several years on the board of managers of the Woman's College Hospital, Philadelphia; aged 80; December 6, of pneumonia.

JOHN C. APPLEGATE, M.D., of Philadelphia; Jefferson Medical College, 1887; head of the department of obstetrics at Samaritan Hospital since 1903, and occupied the chair of obstetrics at Temple University School of Medicine; member of the staff of Great Heart Hospital; aged 65; December 20, of heart disease.

WILLIAM M. SWEET, M.D., of Philadelphia; Jefferson Medical College, 1886; aged 66; December 24, of pneumonia. Dr. Sweet was professor of ophthalmology, Jefferson Medical College. He devised the Sweet eye magnet for the removal of metallic foreign bodies from the eyeball. He also devised the procedure for localizing foreign bodies in the eyeball by x-ray.

ORLANDO A. JONES, M.D., of Sharon; College of Physicians and Surgeons, Baltimore, Md., 1886; World War veteran with the rank of captain; member of the staff of Buhl Hospital for many years, and at one time an instructor in the Nurses' Training School of that institution; aged 63; December 16, after an illness of several months.

WILLIAM P. MURRAY, M.D., head of the Department of Ophthalmology, Otology, and Rhinology at the University of Minnesota, died December 27, from an infection received while performing an operation two weeks previously. Dr. Murray pricked his thumb. Infection developed and his left arm was amputated.

SALEM HEILMAN, M.D., of Sharon; Jefferson Medical College, 1871; supreme medical examiner of the Protected Home Circle and one of the founders of that organization; Mercer County's oldest practicing physician; surgeon of the old Fifteenth Regiment, Pennsylvania National Guard, for 28 years, holding the rank of Major; served throughout the Spanish-American War and was chief surgeon of the Pennsylvania forces; twice received the nomination of his party for a seat in Congress, but owing to the overwhelming Republican majority in the district, was not successful in attaining this honor; surgeon for the Erie and Lake Shore Railroad (now the New York Central) for many years, and among the oldest in point of service on the Erie system; aged 79; December 15, after an illness of six weeks followed by a fractured hip. His son, Dr. Ralph S. Heilman, with whom he was associated in practice, survives.

Births

TO DR. AND MRS. WALTER A. YEAKLE, of Norristown, a son, November 30.

TO DR. AND MRS. RICHARD J. MILLER, of Harrisburg, a daughter, December 25.

TO DR. AND MRS. C. C. GLASS, of Meyersdale, a daughter, Shirley Ann, December 16.

TO MR. AND MRS. WILLIAM W. KEEN FREEMAN, of Philadelphia, a daughter, Mary de Forest Freeman, December 21. The baby is a great-granddaughter of Dr. William W. Keen.

Marriages

DR. CHARLES T. RUSSELL, JR., and Miss Grace Myers, both of Philadelphia, December 11.

DR. E. GAIL HAMILTON, of Warren, and Mrs. Marie Keplinger, of Jamestown, N. Y., recently.

DR. CONSTANCE A. O'BRITIS, of Wilkes-Barre, to Mr. Balys F. Mastauskas, of Chicago, September 6.

DR. DEFORREST P. WILLARD, of Philadelphia, and Miss Margaretta Miller, of Wilmington, Del., December 11.

MISS HOPE BROWN, daughter of the late Dr. H. MacVeagh Brown and Mrs. Brown of Philadelphia, to Mr. Gordon Bell Hattersley, on Christmas Day.

Miscellaneous

THE CORNERSTONE of the new $200,000 Delaware County Hospital at Upper Darby was laid on December 12.

DR. J. W. HAMILTON, of Warren, is seriously ill due to an infected leg following a fall.

DR. B. RUSH FIELD has succeeded Dr. Edwin R. Lewis as superintendent of the Easton Hospital, Easton.

DR. CHARLES H. FRAZIER and his son, Mr. Charles H. Frazier, Jr., of Philadelphia, have returned from an extended trip through China and Japan.

THE ENGAGEMENT has been announced of Miss Margaret H. Hamilton, of Philadelphia, and Mr. George Boyd, son of Dr. and Mrs. George M. Boyd, of Philadelphia.

DR. RICHARD YOFFEE, of Harrisburg, is taking a six-months' course in genito-urinary work at Tulane University of Louisiana School of Medicine, New Orleans.

THE TWENTY-FIRST ANNIVERSARY of the Shenandoah Medical Society was held on November 11. The guest of honor was Dr. Milton S. Kistler. Dr. J. Pierce Roberts was toastmaster.

DR. FRANCIS X. DERCUM, of Philadelphia, was entertained at a birthday dinner by 100 physicians at the Penn Athletic Club, December 11. Dr. Charles W. Burr was toastmaster.

DOROTHY HAZELTON, of Greentown, has assumed the duties of superintendent of the General Hospital, Carbondale, succeeding Mrs. Lydia Thomas, whose resignation became effective October 1.

MR. HARRY SKILLMAN, manager of the Publication Department of Parke, Davis & Company, Detroit, Mich., retired from active service on January 1 after twenty-eight years of connection with the House.

DR. AND MRS. FRANCIS R. PACKARD, of Philadelphia, are sailing this month for Europe, where they will be joined before their return by their daughter, Miss Ann Packard, and Dr. and Mrs. Frederick Fraley, of Philadelphia.

DURING THE LATTER PART OF DECEMBER, Philadelphia was host for the fifth time to the American Association for the Advancement of Science, which held its eighty-third annual convention at the University of Pennsylvania.

AT THE CLOSE OF A LUNCHEON given recently by Samuel W. Reyburn in New York City, fifty business men pledged their aid in raising the second half of the one-million-dollar endowment fund of the American Society for the Control of Cancer.

MISS EVA J. HOOD, directress of the Hahnemann Hospital, Philadelphia, was the guest of honor at a testimonial dinner in the Benjamin Franklin Hotel, December 10, on the occasion of the announcement of her retirement on January 1.

THE JOURNAL OF THE MEDICAL SOCIETY of the State of New York moved into its rooms in the new building of the New York Academy of Medicine on November 8. The new location is at 2 East 103d Street, at the southeast corner of that street and Fifth Avenue.

IT HAS BEEN ANNOUNCED that a new 100-bed maternity hospital will be built upon the present grounds of the Jewish Hospital, on Old York Road, Philadelphia. The hospital will accommodate free and private patients and will be operated irrespective of race, color, or creed.

THE FORTIETH ANNUAL BANQUET of the Association of Ex-Residents of the Philadelphia General Hospital (Blockley) was held in Philadelphia on December 7, with an attendance of 150. Dr. J. Chalmers DaCosta was the guest of honor. Dr. David Riesman was toastmaster. Dr. Francis J. Dever, of Bethlehem, was elected president.

EXAMINATION OF CANDIDATES for entrance into the Regular Corps of the U. S. Public Health Service will be held on February 7, 1927, at the following places: Washington, D. C., Chicago, Ill., New Orleans, La., and San Francisco, Calif. Requests for information or permission to take this examination should be addressed to the Surgeon General, U. S. Public Health Service, Washington, D. C.

NINETY PER CENT of the school children in the districts of Bucks, Delaware, Montgomery, and Chester Counties have been treated with toxin-antitoxin, according to Red Cross workers. In Philadelphia, where the immunization work is in charge of the school medical authorities, the junior department of the Red Cross coöperated with an appropriation of $1,000 to be used for the purchase of antitoxin.

AT A LUNCHEON at the Union League, December 22, 100 citizens of Philadelphia pledged their united effort to raise $3,500,000 for the Pennsylvania Hospital which has served the community for 175 years. Among the needs planned to be met are two new buildings at 8th and Spruce Streets, one a maternity building and the other a nurses' home, and better provisions for the care of mental and nervous diseases at the present site in West Philadelphia.

THE WOMAN'S AUXILIARY of the Allegheny County Medical Society, under the direction of Mrs. John F. McCullough, President, on December 6, staged the largest bridge party ever held in the William Penn Hotel, Pittsburgh. More than a thousand ladies were in attendance for a benefit and social party, the proceeds of which are to be used to buy books for the library of the new Children's Hospital. Mrs. Joseph V. Grahek, chairman, and members of the Activity Committee were aides of the afternoon.

THE NATIONAL COMMITTEE FOR THE PREVENTION OF BLINDNESS held its twelfth annual conference, December 1-2, at the Russell Sage Foundation Building, New York City. The program included joint meetings with the American Social Hygiene Association, the National Organization for Public Nursing, and the Eastern Association of Indian Affairs. There was a sight-saving-class conference, at which the discussion centered upon a report of the British classes based on a recent study, and a special meeting in commemoration of the late Louisa Lee Schuyler.

PLANS FOR THE ENLARGEMENT of the University of Pennsylvania medical schools, hospitals, and allied institutes by the addition of $3,450,000 of new buildings and equipment were recently announced by the Board of Trustees. Coincident with the announcement came the statement that Mr. and Mrs. Henry Phipps, of New York, had made a gift of $500,000 to the University, together with a promise of a deed in fee simple to all the buildings of the Henry Phipps Institute for the Study of Tuberculosis. This gift is conditional upon the University raising an additional $500,000 for the Institute.

THE DAUPHIN COUNTY MEDICAL SOCIETY, Harrisburg, has prepared at considerable expense moving pictures of 160 of its members and is attempting to secure pictures of the few remaining members. They were exhibited at a meeting of the society in the Harrisburg Academy of Medicine, December 7. This undertaking, said to be the first of its kind in the history of medicine, was undertaken largely for its historical value and after the exhibition the pictures were turned over to the trustees to be kept in a vault for five years, when they will be exhibited again, and so on at periods of five years.

ATTENTION IS CALLED TO THE ANNOUNCEMENT on page ii of this issue of the eleventh annual clinical session of the American College of Physicians to be held in Cleveland, Ohio, February 21-25, 1927. A program of unusual interest is being planned in which the Cleveland hospitals and the Western Reserve University will coöperate. A full opportunity will be given every attendant at the session to see the entire hospital equipment of the city of Cleveland, to meet its prominent clinicians, and to form an idea of the amount and variety of the clinical material of the city and see what is being done in the educational use of this material.

THE STAFF OF THE HARRISBURG HOSPITAL is now organized under a new administrative plan. Responsibility for the work in the future will be divided among three men—one of whom represents and administers the surgical division, another the medical division, and a third representing the Board of Managers of the Hospital. The plan includes retirement from the staff at the age of sixty-five years, those being thus retired automatically becoming "consultants." Dr. John F. Culp has been appointed head of the surgical division, Dr. J. B. McAlister head of the medical division, and Dr. Harvey F. Smith representing the Board of Managers. In accordance with the new by-laws which provide for retirement at the age of sixty-five, Dr. David S. Funk, dean of the staff, and Dr. Harry B. Walter, vice-dean, have retired and become consultants, full staff privileges being continued.

A NATIONWIDE STUDY of nursing from the viewpoint of the patient, the doctor, and the nurse was started January 1. Sponsoring the program, which will cover approximately five years, are the National League of Nursing Education, the American Nurses' Association, the National Organization for Public Health Nursing, the American Medical Association, the American College of Surgeons, the American Hospital Association, and the American Public Health Association, with representatives from the public and from the educational field. Included in the project will be a study of the alleged shortage of nurses with investigations in seven or eight states, the grading of all of the more than 2,000 nursing schools annually for about five years to secure basic information for use in establishing educational standards, and a study of the essential elements of nursing procedure and practice. Approximately $25,000 has already been subscribed for the study. The remainder needed will be raised through the participating organizations and by contributions from private individuals and organizations interested in health work.

A SPECIAL COMMITTEE of the New York County Medical Society, according to the *New York Times*, in a report made public recently disapproved the action of the Health Department in issuing a license to the massage unit of the Metropolitan School of Physiotherapy, and charged that "strong political pressure" had been responsible for the issuance of the license. This charge was denied by the Health Commissioner. The report stated that the school has a very doubtful history, investigation on its first application for license showing that it had no equipment and an unsuitable faculty, and it was classed by the investigators as another diploma mill. License has been issued and withdrawn several times, and when the school was opened in September, 1925, the enrollment in the physiotherapy class consisted of 23 naturopaths, 18 chiropractors, and 1 registered nurse. The committee also reported that its investigation had produced evidence that many massage and physiotherapy schools in New York were publishing unethical, misleading, and fraudulent advertisements, and that the entire situation should be investigated. It proposed that the county medical society formulate rules for the approval of such schools, that it publish periodically a list of approved schools, and that the hospitals now lending their clinics to the teaching of physiotherapy refuse the use of their facilities to unapproved schools.

A DEFINITE STEP FORWARD towards increased health consciousness among the lay public was taken in Philadelphia on December 10, when a Health Clinic for Women was opened at the Woman's Medical College of Pennsylvania under the direction of the Department of Preventive Medicine, of which Dr. Martha Tracy, Dean of the Woman's Medical College, is head. Dr. Edith Hedges Matzke is in charge of the new clinic, which will be held every Friday afternoon, with Dr. Elizabeth D. Wilson and Dr. Lola D. McLatchie coöperating.

Insistence on positive health is the central idea on which the Woman's Health Clinic functions, each patient receiving a thorough examination and advice which is intended not only to protect her health and make it difficult for her to contract disease, but also to make it impossible for her to become a menace to the community if disease should develop. It is not the intention of the clinic to treat acute illness, but to diagnose incipient illness by laboratory procedure, and to direct suitable cases to the various specialized clinics. In this way, by giving prompt attention to even the smallest deviation from the normal, the clinic believes that many women will be saved from serious and prolonged sickness and loss of time in their work. Health supervision, including remedial and corrective phases of preventive medicine; periodic physical and medical examinations; health conferences; health consultations; laboratory examinations and educational measures, are included among the active functions of the clinic.

$100,000 OFFERED FOR CONQUEST OF CANCER

Two prizes of $50,000 each have been offered by William Lawrence Saunders of New York for discoveries of the causation, prevention, and cure of cancer. The offer was made on December 15, 1926, and will stand for three years. The donor expects to renew it, if necessary.

Mr. Saunders is Chairman of the Board of Directors of the Ingersoll-Rand Company, Director of the Federal Reserve Bank of New York, and President of the United Engineering Company.

The decision upon which the awards will be made is to be reached by the American Society for the Control of Cancer and approved by the American Medical Association and the American College of Surgeons.

It is Mr. Saunders' idea that discoveries are not always made by experts and that "through the lure of a reward this serious problem might be solved through the genius of a lay mind, by chemists, or through unorganized medical sources."

The offer of Mr. Saunders to the American Society for the Control of Cancer has not yet been formally acted upon by the Society, and it is impossible to say at this time what rules other than those proposed by Mr. Saunders will control the decisions. Information

as to how persons who wish to present their discoveries for consideration should proceed will be announced later.

A. M. A. NEWS

At a meeting of the Board of Trustees of the American Medical Association held in Chicago, in November, the following matters of general inferest to the profession were transacted:

Steps were taken to assure the necessary legislation at Washington in regard to maintaining and marketing the supply of medicinal liquor; the Board endorsed "the draft of a bill intended for enactment by Congress requiring notice to be given before the issuance of regulations promulgated by virtue of any act of Congress to govern the importation, production, sale, or distribution of alcohol and alcoholic liquors and of narcotic and other habit-forming drugs." Every effort should be made to secure the enactment of the proposed bill by Congress.

It was reported that it would not be possible to secure a reduction in railroad rates for the benefit of those members in the far West desiring to attend the 1927 meeting of the Association at Washington.

Arrangements have been completed for a full-time representative to be on duty in Washington during the sessions of Congress.

It was decided that the publication of names of physicians whose liquor permits have been revoked is to be continued, and that a statement concerning the matter shall be published in the editorial columns of the JOURNAL. It was also decided that the Board of Trustees should express to the Council on Medical Education and Hospitals its views that lectures on medical ethics should constitute a portion of the curriculum in every medical school approved by this council.

A NEW SPHYGMOMANOMETER

A new mercurial sphygmomanometer, in which several important objections to this type of instrument are overcome, is described by J. L. Wilson, M.D., and H. N. Eaton, A.M., in the November 20, 1926, issue of the *Journal A. M. A.*, page 1742. It has no cemented joints, and other common causes of mercury leakage and glass breakage are eliminated by the use of a simple, straight glass tube, held in a resilient mounting which enables the tube to withstand shocks which would otherwise shatter it. Severe tests have proved the sturdiness of the new construction.



Fig. 1. New sphygmomanometer.

The tube is so mounted that it can be removed (as for cleaning) by a simple pressure of the thumb, and replaced with equal facility. Thus, if the glass tube should break, the user can quickly insert a new one himself, without having to return the instrument to the manufacturer for repairs.

The insertion of a new tube does not impair the accuracy of the instrument. Each steel reservoir is an exact counterpart of the master steel reservoir against which each tube is individually calibrated. Therefore, the scale, which is separately engraved on each tube, is identically accurate for any instrument of this new type.

The design of the instrument (made by the W. A. Baum Co. of New York) was developed along the lines of maximum service and convenience to the user, without the sacrifice of simplicity and ruggedness, which experience has shown to be so desirable in instruments of this character.

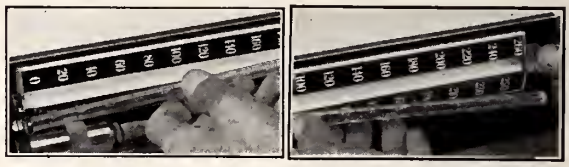


Fig. 2. Manner of removing tube: The instrument is placed on its right side, as in the illustration at the left; then, as shown in the illustration at the right, the top socket is moved out, disengaging the upper end of the tube, which drops into the waiting hand. The tube is replaced by reversing the process.

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BOOKS RECEIVED

THE ROCKEFELLER FOUNDATION. Annual Report, 1925. New York: The Rockefeller Foundation, 61 Broadway.

GENIUS. By Arthur C. Jacobson, M.D. New York: Greenberg, Publisher, 112 East 19th Street. Price, $2.50.

SHELL SHOCK AND ITS AFTERMATH. By Norman Fenton, Ph.D., Associate Professor of Psychology, Ohio University. Introduction by Thomas W. Salmon, M.D., Professor of Psychiatry, Columbia University. Illustrated. St. Louis: The C. V. Mosby Company, 1926. Price, $3.

DISEASES OF WOMEN. By Harry Sturgeon Crossen, M.D., F.A.C.S., Professor of Clinical Gynecology, Washington University Medical School. Sixth edition, revised, and enlarged. Nine hundred and thirty-four engravings, including one color plate. St. Louis: The C. V. Mosby Company, 1926. Price, $11.

PHYSIOLOGY AND BIOCHEMISTRY IN MODERN MEDICINE. By J. J. R. Macleod, M.B., LL.D. (Aberd.), D.Sc. (Tor.), F.R.S., Professor of Physiology in the University of Toronto, Toronto, Canada. Assisted by Roy G. Pearce, A. C. Redfield, N. B. Taylor, and J. M. D. Olmsted, and others. Fifth edition. 291 illustrations, including 9 plates in colors. St. Louis: The C. V. Mosby Company, 1926. Price, $11.

PRACTICE OF PREVENTIVE MEDICINE. By J. G. Fitzgerald, M.D., LL.D., F.R.S.C., Professor of Hygiene and Preventive Medicine, and Director of School of Hygiene and Connaught Laboratories, University of Toronto. Assisted by Peter Gillespie, M.Sc., C.E., M.E.I.C., and H. M. Lancaster, B.A.Sc. Chapters by Drs. Andrew Hunter, A. H. W. Caulfeild, J. G. Cunningham, and R. M. Hutton. Second edition. St. Louis: The C. V. Mosby Company, 1926. Price, $7.50.

INTERNATIONAL CLINICS. A quarterly of illustrated clinical lectures and especially prepared original articles on treatment, medicine, surgery, neurology, pediatrics, obstetrics, gynecology, orthopedics, and other topics of interest to students and practitioners. Edited by Henry W. Cattell, A.M., M.D., Philadelphia, U. S. A., with the collaboration of many noted physicians of the country. Volume IV. Thirty-sixth series, 1926. Philadelphia and London: J. B. Lippincott Company, 1926.

BOOK REVIEWS

From a reviewer we expect information and advice which will guide us safely and to our profit, warning us of the poor, the mediocre, the commonplace, and inviting our attention to merit.

THE MODERN TREATMENT OF HEMORRHOIDS. By Joseph Franklin Montague, M.D., F.A.C.S., of the Rectal Clinic, University and Bellevue Hospital Medical College. 116 illustrations. Philadelphia and London: J. B. Lippincott Company. Price, $5.

As a monograph on hemorrhoids, this volume represents a vast amount of patience, labor, and study. It covers the subject thoroughly. Possibly to the nonspecialist it seems too involved and complicated. It is a worthy addition to proctologic literature and a satisfactory presentation of an important special field in surgery.

Throughout the discussion, neither the patient nor the relation of hemorrhoids to the general systemic conditions are submerged. The chapter on the palliative and prophylactic treatment of hemorrhoids will be of special interest to the internist and general practitioner.

THE TREATMENT OF FRACTURES. With Notes Upon A Few Common Dislocations. By Charles L. Scudder, M.D., Consulting Surgeon to the Massachusetts General Hospital, formerly Assistant Professor of Surgery at the Harvard Medical School. Tenth edition, revised. Octave volume of 1,240 pages, with 2,027 illustrations. Philadelphia and London: W. B. Saunders Company, 1926.

The author of this book needs no introduction to readers on the subject of fractures. The fact that this is the tenth edition, the ninth being now six years old, is evidence enough of the value that the surgical profession has placed upon this work. This last edition is infinitely larger than any of the previous ones. It gives in minute detail the present knowledge of the operative and nonoperative methods of treating fractures. Chapters on special features in fractures have been given to authorities on those subjects for their consideration. Such conditions as pathologic fractures, bone repair, fractures of the maxilla and mandible, massage, anesthesia and anesthetics, birth fractures, all fall within this category. The text is profusely illustrated with special attention to the detailed discussion of treatment and the associated appliances of retention.

The bibliography has been very carefully considered, and those features that have been recognized as valuable have been incorporated in the text. It is a most excellent production, and should be recognized as the authority that it is; namely, a comprehensive, scientific, and thoroughly up-to-date consideration of the entire subject of fractures. The author is to be congratulated.

GENERAL INDEX VOLUME OF THE COLLECTED PAPERS OF THE MAYO CLINIC—1884 to 1925, inclusive. 227 pages. Philadelphia and London: W. B. Saunders Company, 1926. Price, cloth, $5 net.

In this publication a world of material has been placed at the immediate disposal of the profession. The volume will satisfy a widespread demand.

ELECTROTHERMIC METHODS IN THE TREATMENT OF NEOPLASTIC DISEASES. By J. Douglas Morgan, B.A., M.D., Instructor in Radiology, University of Pennsylvania Graduate School of Medicine. Illustrated with 36 line and halftone engravings. Philadelphia: F. A. Davis Company, 1926. Price, $2.50.

This little book of 150 pages fills an important gap in medical literature. There has been a dearth of authentic literature on this subject, and the book should prove of great interest, not only to the advanced worker in electrothermic treatment, but also to those who make occasional use of the method and who would do more of it if they knew how.

The author gives a brief but clear description of the electric currents used, and their effects on biologic tissues. He describes the different types of apparatus now available for producing the desired tissue reactions. He then takes up the various diseased conditions in which electrothermic treatment is indicated, and describes the best technic, in each case, to get the desired results.

DEFECTIVE MEMORY, ABSENT-MINDEDNESS AND THEIR TREATMENT. By Arnold Lorand, M.D., Carlsbad, Czecho-Slovakia. Philadelphia: F. A. Davis Company, 1926. Price, $3 net.

This book may be likened to the "self-helps" of the chemist, which Samuel Smiles published just prior to what Mr. Sullivan terms "Our Times." The reviewer seldom waxes enthusiastic over books purporting to popularized science, but in the present instance he is willing to subscribe to the statement that here is a good book. Perhaps it may have been condensed and freed of many repetitions, mostly those especial pets of expressions and contents the foible of every author; but the conversational method of treatment is desirable in a book intended for the public. The succession of interesting points, many of biographical nature, driving home some principle laid down in the context holds the reader's attention. The volume is a happy blending of good science and the humanities, and we pass from the realm of the chemistry of arteriosclerosis, to the therapeutics of diabetes and to the psychology of suggestion. In short, it appears that the author has realized his "modest hope that each reader may obtain an idea of how a memory which has been injured by a perverted manner of living .....may be improved....."

A GUIDE FOR DIABETICS. By Walter R. Campbell, M.A., M.D., Department of Medicine, University of Toronto and Toronto General Hospital; and Mame T. Porter, B.Sc., Dietitian, Toronto General Hospital. Williams and Wilkins Company, Baltimore, Md. Price, $2.50.

"Diabetic, know thyself" is an essential maxim these days, and any book that will help the patient or the attending physician in this direction is a welcome addition to the list of simple and comprehensive primers on diabetes. The one before us seems to offer the added advantage of a profusion of dietary tables and recipes as well as blank pages for additional notes and memoranda. If a patient cannot arrange his *modus vivendi* with the aid of this guide, he is hopeless.

A LABORATORY MANUAL FOR ELEMENTARY ZOOLOGY. By Libbie Henrietta Hyman, Department of Zoölogy, the University of Chicago. Second edition. Chicago: The University of Chicago Press, 1926.

The second edition has been reset completely, and largely rewritten. The type is good; italics and blackface headings facilitate locating of topics. The manual was prepared originally for elementary class work in zoölogy in the University of Chicago, three months being allotted to the course, but will serve in almost any school as a guide if those in charge adapt their course to the book or vice versa. We feel that it will prove of use in premedical work in zoölogy.

Of the 182 pages, 49 are allotted to the general and special anatomy of the frog, 25 to histology and embryology in general, but chiefly in relation to the frog. No mammalian type is introduced, a topic of most use to students in premedical zoölogy. The exercises relative to protozoa are well outlined, with good representatives. Types of cœlenterates, echinoderms, flat and annelid

worms, mollusca, arthropods, and bony fish are well presented.

Heredity and Mendel's law are treated in but a page and a half, the experiments conducted being on breeding long- and short-winged Drosophila. A subject of such importance could be worked up better by good textbook references as collateral reading.

Phylogenetic relations, so valuable as the basis for comparative anatomy and helpful in the philosophy of evolution, are but lightly touched.

In general, the author has accomplished her task in supplying a useful laboratory guide and manual for a three-months' course, working out in a practical way the principles of general anatomy, histology, and embryology, to prepare the student for advanced work, and to train him in logical and scientific reasoning. The arrangement will not suit the majority of teachers, but as is pointed out in the preface, personal rearrangement will overcome this obstacle.

DISEASES OF THE SKIN. By Richard L. Sutton, M.D., LL.D., F.R.S. (Edin.). Professor of Diseases of the Skin, University of Kansas School of Medicine. 1,147 illustrations, and 11 colored plates. Sixth edition, revised and enlarged. St. Louis: The C. V. Mosby Company, 1926. Price, $12.

Dr. Sutton's volume is a valuable contribution to dermatology, and in but few respects differs from the fifth edition. Some new and rare diseases have been included, which, while of great value to the specialist, are of little value to the general practitioner. The discussion of the various diseases is clear and the treatment is direct.

There seems to be an overabundance of photographs, many of which could well be discarded, but taken as a whole this volume will long serve as a reference book for the student and the specialist.

ESSAYS IN THE HISTORY OF MEDICINE. By Karl Sudhoff, M.D., Professor of History of Medicine in the University of Leipzig, 1895-1924. Translated by various hands and edited, with foreword and biographical sketch, by Fielding H. Garrison, M.D., Lieutenant Colonel, Medical Corps, U. S. Army. Published by Medical Life Press, New York, N. Y.

Carlyle's History of the French Revolution is one of the most interesting of books. But to one ignorant of the facts of that great and significant revolt against tyranny, such a philosophical work would be but bewildering.

It is much the same with Sudhoff's "Essays in the History of Medicine." To those already well read upon the subject they are delightful and their interpretative value is great, but to those others who read them or refer to them for the facts of medical history, they appear sketchy and inadequate.

The diction, which the translators have endeavored to render as nearly like the original as possible, lacks much of the pedantry that German professors so commonly introduce into their essays, but is involved and labored to a degree that makes the reading tedious.

The twelve translators are to be commended upon the successful accomplishment of what must have been a difficult task, and the placing before the American profession of a group of essays by a great master of a subject, the importance of which is just beginning to dawn upon it.

PRACTICAL DIETETICS IN HEALTH AND DISEASE. By Sanford Blum, A.B., M.S., M.D., Head of the Department of Pediatrics, and Director of the Research Laboratory, San Francisco Polyclinic and Postgraduate School. Second revised edition. Philadelphia: F. A. Davis Company, 1926. Price, $4 net.

The preface and introduction comprise about three pages and are good. The 343 pages of diets for different diseases are full of repetitions and contain many questionable statements, and the amounts recommended are far too vague.

The work might be a good reference book for a family without available medical advice, but any physician should be able, by following the general principles of modern dietetics, to make up his own dietaries and specify approximate quantities desirable in any particular case.

The plan of this book is very much out of date. The author does not seem to assume any knowledge of physiology or dietetics whatever on the part of his readers. There are many glaring inconsistencies, as for example, under the diet for obesity, toast or bread are allowed three times a day, while a little olive oil on salad is absolutely forbidden.

MODERN OPHTHALMOLOGY. By James Moores Ball, M.D., LL.D., St. Louis, Mo. Fifth edition, two volumes, 1,479 pages, 598 text illustrations, 24 colored plates. Published by F. A. Davis Company, Philadelphia, 1926. Price, $18 net.

Since the first appearance of this book, a matter of twenty years ago, the growth of the work has assumed proportions in keeping with the wonderful advances in ophthalmology in that period. The author has always availed himself of the assistance of able colleagues in the past in the preparation of the special sections in which they were most expert. The new edition is no exception in this regard. Consequently our attention is attracted to the following new chapters: "The Intracapsular Extraction of Cataract" by Dr. Derrick T. Vail, of Cincinnati, Ohio; "Ophthalmic Therapeutics" by Dr. Wm. Hardy, of St. Louis, Mo.; and "Intra-Ocular Pressure and Tonometry" by Dr. Robert C. Helfebower, of Cincinnati, Ohio. We are also assured that all the other chapters have been subjected to keen and careful supervision and revision, yet we cannot resist giving each a glance, that our duty as reviewer may not be open to question.

The anatomy and embryology of the eye occupy the first hundred pages, and while this may be readily obtained in any first-class textbook on anatomy, additional importance is given to these anatomical facts by reason of the association of well-known names in the domain of ophthalmology with the items under consideration. It is not to be inferred, however, that there is one anatomy of the eye for the ophthalmologist and one for the anatomist. The section given here is well-written, and is certainly a time-saver for the student. The section on the physiology of vision occupies 34 pages, and contains all the information about which we are certain in this regard. There are about 94 pages devoted to the technic of examination, which is most elaborate and painstaking, but which suffers by the type of illustrations. Trifling as this comment may appear, it is inspired by that peculiar psychology of youth which is ready to condemn and discard anything that savors of being old-fashioned, while mature age harbors the antique.

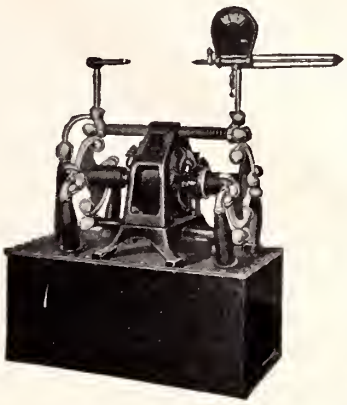
In every edition of this book the chapter upon diseases of the eyelids has been most elaborate and comprehensive, and this departs in no way from its predecessors. It may be said to be encyclopedic in character. Names of the younger ophthalmic surgeons appear in profusion, showing that the modern conceptions of ophthalmic surgery have not been ignored. Under blepharitis there is reference to the use of a solution of formalin in treatment (page 279) which will not merit the approval of those that have used formalin about the eyes. The surgery of the eyelids is a very complete section. There is no mention, however, of the utilization of the galvanocautery in the correction of ptosis, although to the ingenious surgeon this offers a world of opportunity, as it does in entropion and ectropion. All through both volumes of the work the author refers with great frequency to the names and works of the American ophthalmic surgeons, thus giving it the status of an American textbook. The section upon diseases of the lacrimal

(Continued on page xvi.)

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BOOK REVIEWS

(Continued from page 272.)

apparatus has as its distinguishing feature, truth. It is so easy to cure these various affections in a book, but the author brushes aside the tempter and gives illuminating, if not always encouraging, information. The conjunctival diseases are handled consistently with the rest of the book.

We are glad to note that the author continues to regard trachoma as a contagious disease in the presence of its discharge. There are so many heresies rampant regarding this affection that it is refreshing to have the orthodox views substantiated in a modern book. The Kuhnt-Heisrath tarsectomy is described fully, as it well deserves to be. Milk injections, which have been used so extensively in the Spanish countries in anterior inflammations of the eye, are given very scant consideration. Corneal affections, however, are given very thorough attention and we cannot consult these pages without obtaining some new and valuable information. The same may be said regarding the section upon diseases of the iris, with the additional comment that iridotomy is described with certain definite facts regarding its history which are usually ignored in favor of more modern writers.

Every chapter is good but the limitations of space incumbent upon the reviewer imposes the obligation to cover only the more prominent. Thus the crystalline lens and its pathology and surgery come to our attention. This is an extremely good chapter. We note, however, that the author, according to his illustrations (page 677), continues to express the cataractous lens with the eye speculum *in situ*. This is an old and well-tried feature of a former technic, the disadvantages of which doubtless he has overcome by the special type of speculum he employs. The section upon intracapsular extraction of cataract is extremely comprehensive, more so than is common in textbooks. Usually we have to resort to the monographs for it.

Glaucoma, the bane of the ophthalmic surgeon's existence, is given just consideration. The author glorifies iridectomy in this connection. This is as it should be. It is the only operation for this condition. All the surgical operations for glaucoma are described in full and their relative merits freely discussed. Diseases of the orbit, as well as muscular anomalies and refractions, are in capable hands.

On the whole, this ambitious book is a valuable addition to ophthalmic literature, as well as a reliable guide to the searcher after ophthalmic truths.

STEDMAN'S PRACTICAL MEDICAL DICTIONARY (Illustrated). By Thomas Lathrop Stedman, A.M., M.D. Ninth revised edition, New York: William Wood and Company, 1926. Price, $7.50.

In the present revision of this dictionary several hundred new titles have been introduced and a few old ones have been discarded. The author points out that numerous changes have been necessary in order to conform to the new editions of the *U. S. Pharmacopœia* and the *National Formulary*, in which many new drugs have been introduced and from which more have been dropped; while not a few changes have been made in the official titles. Special attention has been paid to synonyms, these being noted under the word "defined" and also inserted as main titles with cross reference to the one selected for definition. In this relation attention may be called to the lists in small type inserted here and there under the English titles, noting the scientific terms for the various conditions associated with the part. For example, under "phobia" there are enumerated 126 classes of phobia. This feature is a very valuable one and is carried out with many other words.

Eponymic terms have been inserted as main titles—Addison's disease, Bright's disease, Camper's angle, etc., are defined under the proper name and not under "disease," "angle," etc. Under such names there is included

(Continued on page xviii.)

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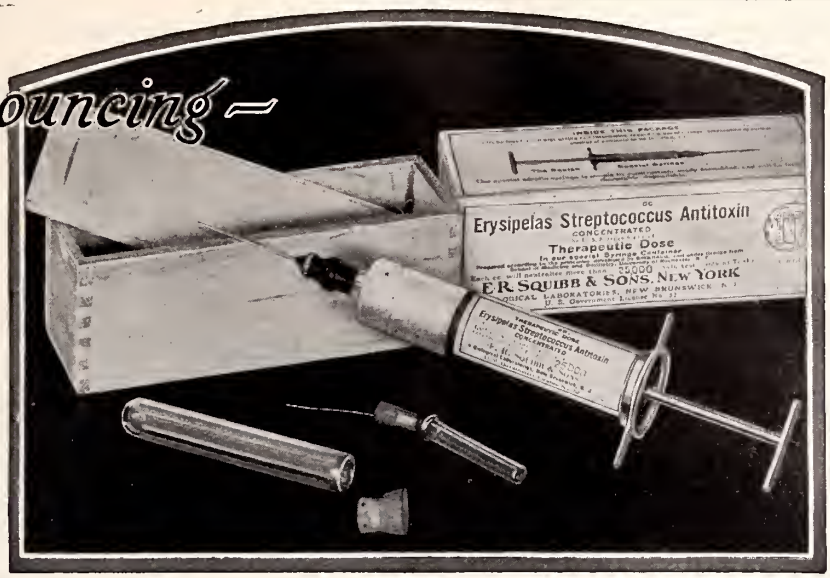
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BOOK REVIEWS

(Continued from page xvi.)

brief biographical details regarding nationality, profession, dates of birth and death. In other cases the qualifying word has been inserted as the main title, but only when this is a more obvious arrangement; typhoid fever, for example, is commonly called simply typhoid, and it is therefore defined under typhoid instead of under fever. When there is any doubt as to which word of a compound term would naturally be looked for, a cross reference is given to the main title. In cross references to a compound term, when uncertainty may arise as to the main title, this is indicated by an asterisk appended to one of the words in the term. When the subtitles are many and not eponymic, reference to them has been facilitated by placing them in the form of a table of column width, distinguished by type of smaller size under the main title, but alphabetically arranged so that the one wanted will strike the eye at once. The lists of arteries, muscles, nerves, drugs, etc., have been arranged in the same way so as not to interrupt the alphabetical sequence by page-wide tables. These tables, or lists, embrace all the official preparations of the *United States Pharmacopœia* and the *British Pharmacopœia,* as well as those of the *National Formulary,* and also the anatomical terms, these being placed under the Latin titles, with cross references from the English names. The tables of weights and measures, comparative thermometric and barometric scales, the chemical elements with their symbols and atomic weights, and other tabular data have been placed in the Appendix.

All the words sanctioned by the *Basle Anatomical Nomenclature* are given the preference in this dictionary, and when they differ from the terms formerly in use and still employed by the majority of older writers, they are indicated by a sign (BNA).

Definitions of all the chemical, botanic, dental, and veterinary words which a physician is likely to meet in his reading are included. In addition, definitions of the terms relating to insurance, such as the different forms of insurance, life tables, policies, risks, etc., have been introduced in considerable number.

Terms familiar to homeopathic and electric therapeutics are defined. Certain data regarding mineral springs, the composition, and the therapeutic indications of the most important spas in Europe and America are given.

Special attention has been paid to the etymology of the words used in medicine. In the case of the Greek sources they are given in Roman letters rather than Greek. In the spelling of medical terms, preference has been given to the simpler forms; for example, the elimination of the diphthongs *æ* and *œ—hemorrhage* and *edematous* rather than *hæmorrhage* and *œdematous.* However, the old spelling is given as alternative. The correct terms are indicated in this way: For a definition of oöphorectomy, the reader is referred to oöthecotomy, and under that title the definition is given. Another example, ovariotomy (a mixed Latin and Greek derivation and therefore deplorable) is defined under that title, but a correct synonym, "oöthecotomy," is also given. In this way the more proper term is indicated.

Another valuable feature is the introduction of a number of the most common chemical formulas as main titles, with their definitions in ordinary language.

The dictionary is undoubtedly an up-to-date work. Dr. Stedman has obviously expended considerable time in the compilation of this modern, authentic, and valuable dictionary.

SURGICAL CLINICS OF NORTH AMERICA. Mayo Clinic Number, October, 1926. Philadelphia: W. B. Saunders Company, Publishers.

The October, 1926, number of the *Surgical Clinics of North America* contains more material than many of the previous issues. It is the Mayo Clinic Number and a list of authors is given, exactly like the lists which

(Continued on page xx.)

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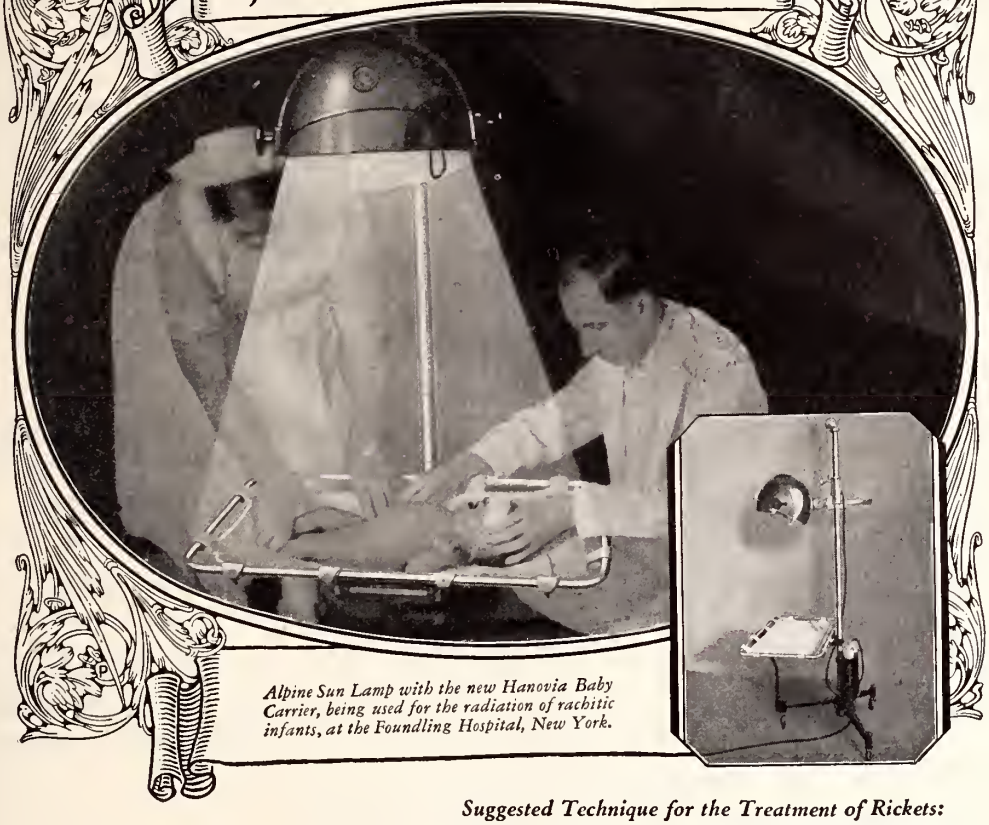
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BOOK REVIEWS

(Continued from page xviii.)

appear in the Mayo publications. All branches of surgery are covered, and each branch is accompanied by case histories which illustrate the subject thoroughly. The plates are clear, the statistical tables are interesting, and on the whole it is an issue that is well worth reading.

INTERNATIONAL CLINICS. A quarterly of illustrated clinical lectures and especially prepared original articles on topics of interest to students and practitioners. By leading members of the medical profession throughout the world. Edited by Henry W. Cattell, A.M., M.D., Philadelphia. Volume III, 36th series, 1926. Philadelphia and London, J. B. Lippincott Company.

The frontispiece is graced by a soft-toned photograph of The Right Hon. Sir Clifford Allbutt, K.C.B., M.D., F.R.S., with a thrilling biography of the man. "The Disease Factor in History" occupies 12 pages that make fascinating reading. "A Study of Discharge Convulsions Simulating Epileptoid Seizures," by L. Pierce Clark, M.C., covers 50 pages and represents thoughtful study of the subject. "Vitamins and their Therapeutic Importance" by N. Philip Norman, M.D., of New York City, is well discussed. E. Bosworth McCready, M.D., has an informing article on "Nervous, Delicate, and Backward Children." Neurology, Psychiatry, and Psychology are well handled in articles by Professor M. Minkowski, M.D., of Zurich, Switzerland, and Professor W. R. Hess, of Zurich, Switzerland. Moses Keschner, M.D., and Herman Selinsky, M.D., of New York City, and Professor Oswald Bumke, M.D., of Munich, Germany, discard the Freudian analysis in appropriate manner. The remaining articles in this volume are well worth reading.

PSYCHOANALYSIS AND BEYOND PSYCHOANALYSIS. By Leonard L. Landis, M.D., formerly Assistant Clinical Instructor at Post-Graduate Hospital and the University of New York Internal Medicine Department; etc. Published by the American Association of Independent Physicians, 1924.

Some research and study has appeared at intervals in medical literature on this subject, from such writers as Adler, Freud, Brewer, Jung, James, Lawrence, Woolf, and Dell. They have differed in many respects, yet as one step leads to another and as one thought begets another, so these writers have opened up the vast forest of the unknown. Dr. Landis has the courage and the ability to surpass the others and stands where none others have dared to step. His chapter on sex and emotion is worth while, and very aptly calls attention to the early training, environment, and social surroundings of the young. Many individuals are now languishing in the asylums or behind prison walls because they failed to have the right kind of social surroundings in the early formative age.

The chapter on dreams may be a little overdrawn, for it seems that correct interpretation has lapsed since Joseph and his followers had their day.

In the chapter on medicine and religion the author speaks of suggestive therapeutics, and gives some illustrations to prove his belief in the results gained in following out this force when properly used. He also considers the various types of neuroses in the forms of hysteria, hallucinations, and obsessions, and with his master mind reassures his patient, regains his confidence, and a happy convalescence follows.

This is a work of great value to the man who deals with this distressing condition of the human family.

It is to be hoped that the work of the psychologically inclined will continue until the depth of the unknown is made clear to all who seek for knowledge.

(Concluded on page xxii.)

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BOOK REVIEWS

(Concluded from page xx.)

A PRACTICE OF PHYSIOTHERAPY. By C. M. Sampson, M.D., formerly of the Physiotherapy Service, Walter Reed U. S. Army General Hospital, Washington, D. C. 146 illustrations. St. Louis: C. V. Mosby Company, 1926. Price, $10.

The first half of this work is devoted to a description of high-frequency currents, infra-red rays, static modalities, ultraviolet rays, x-rays, sinusoidal currents, massage, and hydrotherapy. Very strong terms are used to emphasize the absolute necessity of accurate technic, and failures in results are laid chiefly to this cause. Manufacturers and salesmen are criticized for distributing high-frequency machines of improper construction and inadequate power, especially the portable type. Diathermy receives unusually full treatment in untechnical language and with exceptional clearness by means of well-chosen examples.

The second half of the volume deals with the clinical application of the various forms of physiotherapy, and for convenience of reference the diseases are arranged alphabetically.

This is a book to be recommended, especially to those members of the profession who are considering adding some forms of electrotherapy to their equipment, to aid them in choosing the type of machine, and in employing the proper technic.

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SOME FUNGOUS INFECTIONS OF THE SKIN AND APPENDAGES*

HOWARD FOX, M.D.†
NEW YORK, N. Y.

A discussion of all of the fungous infections of the skin, however brief, would be out of the question in the space at my disposal. It is my purpose, therefore, to describe the more important features of some of the so-called fungi imperfecti, including the Microsporons, Trichophytons, Achorions, and Epidermophytons. The class of molds known as fungi imperfecti are of a comparatively simple structure, though they show some differentiation and are generally described as being made up of mycelium and spores. The former constitutes the vegetating part of the plant, and consists of a mass of filaments composed of chains of cylindrical cells. The so-called spores are small spherical bodies which usually represent the reproductive part of the organism.

While the organism which causes favus was discovered as long ago as 1839 by Schönlein and that of ringworm by Gruby two years later, much of our knowledge of these two diseases is due to the brilliant researches of Sabouraud. Further investigations of value have since been made by Castellani, Hodges, Weidman, Hopkins, Greenwood, McCarthy, Greenbaum, and others.

The fact that Sabouraud was able to differentiate some thirty different species of Trichophyton (to which others have been subsequently added) is chiefly of theoretical interest. It is not unreasonable to hope, however, that further investigation along these lines may lead to results of more practical value, especially in view of our very incomplete knowledge of fungi in general.

The specific ability of certain fungi to produce definite cutaneous lesions is rather limited. It is perhaps best illustrated by the characteristic eruption of favus which the Achorion almost always causes. Even this organism may produce a type of eruption that is rare and not well recognized, such as the pityriasic and impetiginous forms first described by Cazenave and Dubreuilh respectively.

The fungi which we are to discuss confine their activities to the horny layers of the epidermis and the horny appendages of the skin; namely, the hair and nails. Some types involve all of these structures, while others attack only one or two of them.

RINGWORM

The first of the four genera in question, the Microsporons, attack the epidermis (glabrous skin) and the hairs of the scalp. They are of two classes, those of human origin, represented by the Microsporon audouini, and those of animal origin, of which the commonest type is the Microsporon lanosum. These organisms are responsible for a large number of cases of ringworm of the scalp, chiefly affecting children. They produce the characteristic so-called gray-patch ringworm consisting of one or more roundish, scaly, various coin-sized patches which show the characteristic "stumps" of hairs broken off a few millimeters from the surface. This is the type of ringworm which is generally recognized without difficulty by the layman, though its treatment (except for the x-ray) is as difficult as its diagnosis is easy. The eruption due to Microsporon audouini is of a noninflammatory type, and exemplifies the principle that the less inflammatory the process the more persistent its duration. The intense reaction shown in the pustular and kerionic types is evidence of an effort on nature's part to effect a cure, which it does rather speedily in the case of kerion.

The Microsporon lanosum was originally called Microsporon caninum, until it was found that it affected other animals beside the dog. The present name refers to the woolly appearance of the organism in culture. This organism is slightly more inflammatory in its action, and consequently the eruption it produces is somewhat less persistent. It represents the commonest type of animal origin, though it does not necessarily

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Fig. 1. Eczematoid ringworm of the foot due to infection by Trichophyton interdigitale (Priestly).

mean that the disease is directly contracted from some animal. The majority of infections, in fact, are carried from one child to another. In addition to being a very common cause of ringworm of the scalp, this organism may also be responsible for ordinary ringworm of the smooth skin. Rarely, the Microsporons may be responsible for causing kerion, as was shown in one of my reported cases.

The Trichophytons constitute a much larger genus than the Microsporons. Their name would signify a fungus which attacks hairs. In addition, however, they are the cause of ringworm of the glabrous skin and nails. The Trichophytons are sometimes spoken of as "large-spored" organisms, which is not quite correct, as at least one of this class (the microid ectothrices) produces spores as small as those of Microsporon. The classification of the Trichophytons made by Sabouraud was based not on their clinical or cultural characteristics, but on the manner in which they affected the hair. Those which are eventually entirely within the hair itself he called endothrix and those without the hair ectothrix, called by others endo-ectothrix as they are both within and without the hair. A third small class in which the fungus was chiefly in the substance of the hair, a portion only being without, Sabouraud designated as neo-endothrix. At the outset of the invasion it is only natural that the fungus in penetrating the follicle should be outside of the hair. In the case of the endothrix type, it speedily penetrates the cuticle of the hair and then lies wholly within the substance of the cortex.

Of the numerous varieties of Trichophyton endothrix, three are rather common: the T. acuminatum, T. crateriforme, and T. violaceum. They are responsible for infection of both hairy and nonhairy parts, while the last-named variety may cause ringworm of the nails. These organisms are generally responsible for ringworm with small patches, often with very slight evidence of the disease at all. This is the type which the layman would never suspect as being ringworm, and the same is too often true of the physician. It frequently requires careful search to see that broken-off hairs are present. Each infected area may consist of a little crust which enmeshes the hairs, some of them twisted like the letters W or Z. At times the appearance of keratosis pilaris is suggested, or in rare cases there are temporary small areas of complete baldness. The class of fungi designated as neo-endothrix is represented by the Trichophyton cerebriforme, which is frequently the cause of ringworm of the beard.

The various types of Trichophyton ectothrix are divided by Sabouraud into the microids and megaspores, the former being still further subdivided into the gypseum and niveum groups, and the latter into those producing velvety and faviform cultures respectively. The fungi of the gypseum group are allied by their clinical appearance (kerion), their microscopic, cultural and mycologic characteristics. They are all vigorous in their growth, both on the skin and in culture, and are viable for a considerable time outside of the body. They are all readily inoculable in animals.



Fig. 2. Favus of the glabrous skin, showing extensive eruption of mortarlike crusts.

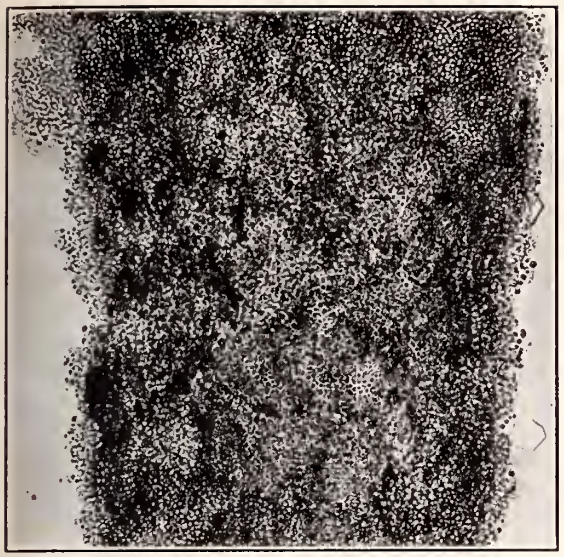


Fig. 3. Microsporon infection of hair, showing characteristic mosaiclike sheath of spores.

Favus

Favus, which is fortunately rare in this country, is a much more serious disease than ringworm because of its production of scars and permanent baldness. Unlike ringworm, its course is not influenced by the advent of puberty. In the vast majority of cases of ringworm of the scalp the disease disappears spontaneously about the age of puberty. Ringworm of the adult scalp is a rarity, as shown by the report of Dr. Richard W. Fowlkes and myself in which we were able to find references in the literature to only 53 cases (including 3 of our own) in which the diagnosis was microscopically or culturally proved. We found statements by Japanese writers that the disease in adults was not so rare in Japan, though statistics on this point were not given.

Favus of the scalp may exist for many years and show little tendency, as ringworm always does, to spontaneous cure. When the characteristic yellow "cups" appear upon the skin, it is said that they never disappear spontaneously. In badly neglected cases the disease may be very extensive and even have a fatal termination. On the glabrous skin the lesions do not produce scars, thus casting doubt upon the theory that pressure upon the scalp by the favus crusts is the cause of scarring. The disease is fortunately much less contagious than ringworm, apparently requiring long intimate contact for its spread. Frequently but one member of a family will be affected.

While several species of the Achorion (the causative organism of favus) have been isolated, practically all of the human cases are due to the Achorion schœnleinii, and infection is almost always carried from one human being to another. Cases of infection from mice or other animals which suffer from the disease are extremely rare. The clinical recognition of an old favus with its atrophic areas of scarring covered by sparse hairs is generally easy. In some of the early cases, especially when crusts have been removed, as in the case of emigrants I have frequently seen at Ellis Island, the clinical diagnosis is not always possible. The hairs are said to be characteristically dry, gray, and unbroken. I have found the presence of redness of the infected areas a much more valuable symptom, and, in addition, the frequent presence of tiny pustules in which fungus can often be demonstrated. It may be necessary to wait several weeks for the cups to appear, the process being hastened by applying a "sweat cap" consisting of layers of adhesive plaster to the scalp. It is very true that the hairs in favus do not break off near the surface as often as do those in ringworm, the reason being that a smaller amount of fungus has entered the substance of the hair. It is due to this fact that a cure of favus by mechanical epilation is possible, whereas in ringworm it is a procedure of little or no value.

"Eczema Marginatum"

The fourth type of fungus classed by Castellani as a separate genus is the Epidermophyton, the most important species of which is the Epidermophyton inguinale. The familiar condition known as "eczema marginatum" is due to this parasite, and was first described by Hebra, though he denied its parasitic causation. It is commonly situated in the genitocrural region, where it is known as tinea cruris, jock-strap itch,

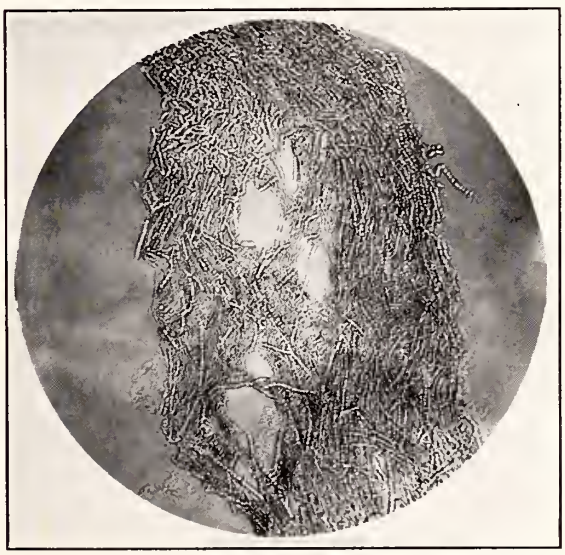


Fig. 4. Trichophyton infection of hair, showing chains or rosaries of "sporulated" mycelium.



Fig. 5. Microsporon audouini. Nineteen-day-old culture on Sabouraud's isolation medium (using glucose) in a Petri dish. The white downy surface with radiating folds is characteristic.

etc. Its contagiousness cannot be very great, as it is frequently seen in married men whose wives show no evidence of the disease. It may be present for years with periods of quiescence. In one of my patients, a physician, it had existed for twenty-five years. It must be differentiated from intertrigo and erythrasma, the latter of which is due to a small fungus, the Microsporon minutissimum. The patches of eczema marginatum have reddish, sharply defined borders, and are much larger and more capricious in their course than erythrasma.

The Epidermophyton, in addition to causing the classical eruption of eczema marginatum, may be responsible for eczematoid eruptions on the hands and feet, and for macerated conditions between the toes. This parasite never invades the hairs, even though it may extend upon the hairy surface, as seen in an extensive case reported by Richard Weiss.

Microscopic Examination

Direct microscopic examination of hairs, scales, and pus will often determine the presence of fungus, though the differentiation by this means is very limited. Examination of the hairs in an ordinary extemporaneous preparation using 30 per cent caustic potash, will at once show the difference between Microsporon and Trichophyton. In the former there will be a mosaiclike sheath of flattened polygonal-appearing spores surrounding the root of the epilated hair. By changing the focus it is seen that this sheath consists of many layers of spores. Little or no mycelium will be seen within the hair itself. In the case of trichophytons the fungus is invariably in the form of filaments composed of short elements, hardly longer than they are wide and characteristically arranged in chains. "Sporulated mycelium" is a popular term for these chains, which do not consist of real spores. At first glance, in the case of ectothrix parasites, the closely crowded chains may resemble the mosaic of the Microsporon. Careful observation will show at least at the borders that these spore-like bodies are formed by parallel, closely packed chains or rosaries.

In the case of the Achorions, the presence of numerous air bubbles will often be apparent, Sabouraud stating that such a condition is "almost characteristic" of favus. They are also noted in hairs infected with microid ectothrices. Lesions on the glabrous skin show only mycelial elements, differing in this respect from tinea versicolor, in which groups of spores are characteristically interspersed with mycelium. In making examinations of hairs it is advisable, but not absolutely necessary, to wash them with ether. It is also improper to attempt to sterilize the surface of the skin when examining hairs or scales, as this is useless and may cause contamination from the neighborhood.

Cultures

Some of the painstaking work of Sabouraud has lost its value because many of his cultures were made with crude maltose, a sugar that is practically unattainable at present. When it is realized that cultural appearances of fungi differ under identical conditions of media, heat, moisture, etc., it will be realized that a change in an important constituent of the media leads to great



Fig. 6. Achorion schœnleinii. Eleven-months-old culture on Sabouraud's isolation medium (using glucose) in an Erlenmeyer flask. The smooth, shiny surface and spongelike mass, eventually splitting the medium, is characteristic.

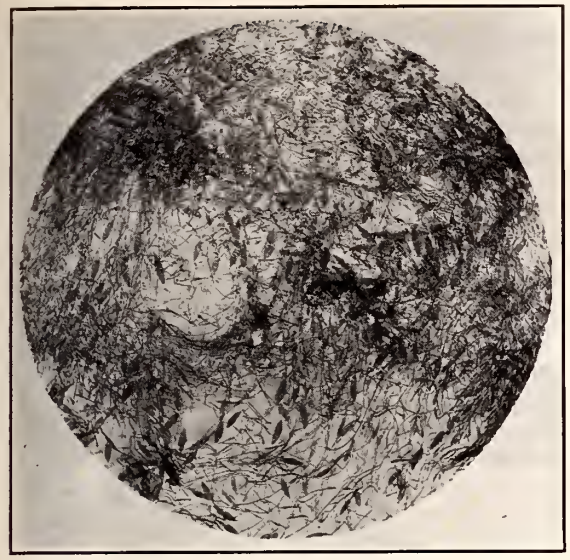


Fig. 7. Microsporon lanosum. Hanging-drop culture twelve days old, showing innumerable sharp-pointed fusiform bodies which are characteristic of microsporons of animal origin.

variation in results. My cultures (see illustrations) were made at room temperature with Sabouraud's isolation medium (using glucose in place of maltose). It has been a source of great satisfaction to learn that a large proportion of successful cultures could be made with Petri and deep Stender dishes in place of flasks. For purposes of photographing cultures, flasks, especially of hard glass, are obviously less convenient to open, though this can be done by a hot wire or fine bunsen flame.

Only those who have attempted this fascinating work realize how difficult it is to obtain growths that closely resemble the beautiful illustrations in Sabouraud's book, *Les Teignes*. At times they will run surprisingly true to form, and at others be anything but characteristic, even when working with material from Sabouraud's laboratory. Hardly more than a dozen species of the fungi under discussion can be recognized with regularity even by the most experienced. A few develop a characteristic pigment such as Trichophyton rosaceum and violaceum and Epidermophyton, others present striking geometrical figures, such as the Microsporon audouini. Variations in the elevation of the aërial hyphæ will cause a velvety or powdery appearance, as the case may be. In some of the cultures there will be no upward growth of hyphæ, the mass appearing smooth and shiny as in favus. Another difference is the rate and extent of growth, and finally the degenerative change called pleomorphism by Sabouraud. Why he should have used this word for a change from a somewhat complicated to a simple structure I do not understand. Monomorphism would have been a more rational term for this change.

Hanging-drop cultures (on Sabouraud's glucose boullion) are of great value in differentiating general classes of dermatophytes, and of assistance in aiding the recognition of a few species. Such cultures are diagnostic at a single glance of Microsporon of animal origin (tapering "fuseaux"), Epidermophyton (blunt-end "fuseaux"), and Trichophyton gypseum (tendrils and spirals). The pectinate bodies are also characteristic of the Microsporon.

Onychomycosis

Fungus infection of the nails (onychomycosis) may be due either to the invasion of Trichophyton or Achorion. As the clinical appearances in either case are practically the same, the differentiation must be made by cultures. The latter are by no means always easy to obtain and the same can be said of the direct microscopic examination. In some cases the clinical diagnosis may be difficult, but as a rule it seems to me to be fairly characteristic. The nails are apt to be asymmetrically affected, though in rare instances it is true that all of the nails of the fingers and toes may be affected. The disease begins at the distal portions of the nails and advances toward the root. Onychomycosis is also characterized by absence of redness, swelling, and pustulation, which are so evident in cases of paronychia.

Treatment

The treatment of ordinary ringworm of the glabrous skin (tinea circinata) is as simple as the same disease affecting the scalp is difficult.



Fig. 8. Epidermophyton inguinale. Hanging-drop culture twenty days old, showing clusters of fusiform bodies with blunt ends characteristic of epidermophytons.

Almost any antiparasiticidal ointment will answer, the disease under any circumstances being self-limited. The treatment of favus of the glabrous skin is hardly more difficult, it being necessary first to remove the scutula with greasy applications or otherwise. Fungous infections of the hands and feet are now recognized to be extremely common, more so since the war and doubtless partly due to it. Their treatment is often extremely difficult. In my opinion three of the most useful remedies are x-ray, salicylic acid, and chrysarobin. As a rule, the x-ray should not be used in conjunction with irritating remedies. For infections between the toes, nothing is more effective, in my opinion, than a 20-per-cent chrysarobin ointment. The same remedy in 5-per-cent or 10-per-cent strength is also of great value in the treatment of "eczema marginatum." Of late, I have been using for obstinate dermatophytoses of the hands and feet a remedy suggested by Castellani, consisting of salicylate of mercury 1 part, salicylic acid 2 parts, eucalyptol 2 parts, and vaseline 30 parts. The results have been encouraging.

The treatment of onychomycosis is generally extremely difficult. Long and persistent scraping of the affected portions followed by inunctions of Whitfield's ointment may result in a cure. Avulsion of the affected nails under local or general anesthesia will generally cure the disease, though even this rather radical procedure will fail at times.

In the treatment or ringworm of the scalp, vaccines have proved very disappointing. It is hard to see why they should be expected to benefit a disease confined to the epidermis which would not be accessible to immune bodies in the blood. It is necessary only to mention in conclusion that one of the most brilliant results in x-ray therapy has been in the treatment of ringworm and favus of the scalp. Again we are indebted to Sabouraud, this time for an extremely practical idea; namely, the use of the x-ray in measured doses to cause a temporary fall of hair and with it removal of the fungus and cure of the disease. While his early technic has been greatly improved, he is entitled to the credit of introducing a method which, in skilled hands, will do in weeks what had formerly required years to accomplish.

ABSTRACT OF DISCUSSION

FREDERICK M. JACOBS, M.D. (Pittsburgh, Pa.): The Dermatologic Section of the American Medical Association should recommend the standardization of media for growing fungi and for reporting results obtained by growing them. At the present time the reports are valueless on account of the use of different media.

WILLIAM H. GUY, M.D. (Pittsburgh, Pa.): One point in connection with ringworm that may be of interest is a modification of the Adamson-Kienböck technic which has been used many times with success. A short unit is applied instead of a full unit as originally suggested. Infected hairs are more susceptible to the x-ray. In conjunction with this method we use mild, nonirritating antiseptics, such as a mild ammoniated mercury, as soon as epilation begins. The length of time that the patient is away from school is not materially longer than following complete epilation, and certainly his appearance is much better.

FRANK C. KNOWLES, M.D. (Philadelphia, Pa.): What are the details of the technic?

DR. GUY: Use the usual Adamson-Kienböck technic of five areas. Use the standard technic of MacKee with two milliamperes, six-inch spark gap at eight-inch distance, the usual time being three minutes. The application is made fifteen or twenty seconds short.

Case Reports*

ACUTE SUPPURATIVE APPENDICITIS WITH ACUTE SUPPURATIVE CHOLECYSTITIS†

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No abdominal conditions confront the general surgeon so commonly as appendicitis and cholecystitis, in the order named. The occasional difficulties in their differential diagnosis are possibly due to a coexistence of both diseases. In this we are not referring to those cases of appendicitis and cholecystitis in which anatomic relationship causes confusion—as, for instance, those in which the appendix lies contiguous to or is adherent to the gall-bladder—but to those in which, without this proximity and in their normal location, there is clinical and pathologic evidence of a relationship between the two.

Considerable literature on the subject has been published in the last twenty-five years by clinical and experimental surgeons. Most of it, however, has been written on the evidence of relationship in the chronic type of appendicitis and cholecystitis, and but very little of the associated findings in the acute form of either disease.

We, therefore, reviewed first a series of 1,212 records of primary appendicitis which came to operation—901 acute and 311 chronic. In the acute cases, 226 requiring drainage, it is at once apparent for obvious reasons that general abdominal exploration was permissible in so small a proportion that any conclusions drawn therefrom would be of little value. But in those

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†From the Surgical Department, Sacred Heart Hospital, Allentown, Pa.

few acute cases, as well as in some chronic, in which we explored the upper and lower abdomen, we did find external evidence of gall-bladder inflammation, not, however, distinct and separate from general parietal and visceral involvement of apparent direct extension. Also in the 311 chronic cases we found ourselves guilty of a McBurney incision too frequently, not permitting general exploration, and consequently having a return of not a few of our own patients as well as some of other surgeons' for a subsequent gall-bladder operation. In the follow-up of this series we found some cases where the symptoms of gall-bladder disease disappeared following appendectomy, the latter probably permitting a gall bladder with beginning disease to return to normal. This review of appendix records was unsatisfactory in showing a possible relationship between appendicitis and cholecystitis.

We then turned to a second series of records made up of 165 cases of acute and chronic cholecystitis (124 with stones and 41 without)—122 cholecystectomies and 43 cholecystostomies. Here we found more definite evidence of association. In this group 41 were acute and 124 chronic. As in acute appendicitis, here also the very acute gall bladder precluded further exploration. Yet in 41 of the acute cases, appendectomy was done 10 times—4 with a variance of opinion between operating room and laboratory as to acuity in the appendix inflammation, and 6 with definite agreement of an associated chronic appendicitis. In the 124 chronic gall-bladder cases the appendix was removed 72 times: with difference in interpretation of an associated acute appendix 5 times, 62 agreed chronic, and 5 normal appendices. In other words, in 165 definite cases of cholecystitis in which appendectomy was done 82 times, we had clinical and laboratory agreement in diagnosis of chronic appendicitis in 68 cases, and only 5 were found normal. But we had variance in diagnosis of 9 associated acute appendices, exclusive of one case in which there was coexisting an acute suppurative appendicitis and an acute suppurative cholecystitis, the operative and laboratory diagnoses being in complete agreement. A brief report of this record is as follows:

The patient was a laboring man, aged 39, married. His father died of "tuberculosis" at 46; his mother of "jaundice" at 49. He had had the usual children's diseases, but no other illness or injury. About six months before we saw him, epigastric distress and nausea developed after meals. One week ago he had had sudden severe general abdominal pain, gradually subsiding to recur two weeks later with marked severity. No vomiting was associated. He was sent to the hospital with the diagnosis of "acute abdomen."

His general appearance was vigorous, temperature 99.2°, pulse 88, respirations 22, tongue heavily coated, heart and lungs normal, no abdominal masses or distention, but right-sided rigidity with extreme tenderness in the gall-bladder region, extending outward and downward into the right groin. There was no hernia nor jaundice. The leukocytes numbered 17,200. The urine was yellowish, but contained no bile. Specific gravity was 1.033. There was a marked trace of albumin, but no sugar nor indican. Pavement cells and a few cylindroids were also present. The blood Wassermann was negative.

Operation: A right middle rectus incision was made, and thin, inoffensive fluid escaped. The appendix was thickened and congested, with bread-and-butter adhesions. It was removed. The gall bladder was rigid, tense, and deeply injected. It was opened, emptying out mucopurulent fluid, then heavy creamy-white pus. There were no stones. A tube was sutured into the gall bladder, and the wound closed around it.

As appendix and gall bladder both showed acute inflammation, the former was opened, showing the distal third filled, too, with heavy creamy-white pus grossly similar to that found in the gall bladder. The laboratory confirmed the operative findings with a subsequent report of pure cultures of colon bacilli made from the appendix and gall-bladder pus. The patient was discharged in 44 days, and was entirely well two years later.

This is the one case of combined acute suppurative appendicitis and acute suppurative cholecystitis found in 1,212 personal records of primary appendicitis and 166 of cholecystitis.

INTESTINAL OBSTRUCTION CAUSED BY A MECKEL'S DIVERTICULUM

WALTER CORSEN SHAW, M.D.
RIDGWAY, PA.

This case adds nothing to the picture of acute intestinal obstruction except that the obstruction was produced in a most unusual manner. There are no special symptoms by which it can be diagnosed. The cause can be determined only by operation.

Meckel's diverticulum results from the incomplete closure of the omphalo-enteric duct, which leads from the umbilical vesicle to the lowest portion of the small intestine and is in open connection with the latter. The frequency of occurrence is about one or two per cent, and is most frequent in males. Persistance of the duct may result in disturbances due to perforation, invagination, or strangulation. I have found but one simliar case reported, this by Rombach in 1924.

The patient was a tannery foreman aged 52. He had had the diseases of childhood. Otherwise the history was negative except for the past five years. During this time he had had three attacks of acute abdominal pain which were diagnosed as appendicitis. The attacks were always relieved by catharsis and enemas, and he

was never confined to bed longer than one day with any attack.

The day his present illness began he had gone to work after dinner feeling perfectly well, but at about 4 p. m. he was seized with severe abdominal pain in the region of the umbilicus. The pain was so severe that he was taken to the company's office and a physician called, who advised removal to his home, gave him a hypodermic for the pain, and ordered hot applications to his abdomen and a soap-and-water enema. Following this treatment the pain was somewhat relieved, but about 9 p.m. he became nauseated and vomited large quantities of partially digested food. The pain became more severe and was spasmodic in character. He continued to vomit at intervals during the night, and suffered intense pain. In the morning his physician called and ordered more enemas. These were given with no results. At this time he was regurgitating mouthfuls of foul-smelling fluid every few minutes, the pain becoming more severe, and he was suffering greatly from thirst.

I saw the man in consultation in the late afternoon, and found him suffering with all the symptoms of acute intestinal obstruction. His skin was cold and clammy, pulse 140 and thready, temperature 100, respirations 38. His entire abdomen was very rigid and very tender, with slight distention in the epigastrium. Chest negative. A diagnosis of intestinal obstruction was made. On account of his grave condition he was subjected to no further examination, but was ordered to the hospital where immediate preparation was made to operate. He was given gas-ether anesthesia, and the abdomen opened through a right-rectus incision. Upon opening the peritoneum a few ounces of bloody serum escaped, and distended loops of intestine pushed into the wound. These were gently pushed aside, and the ileocecal valve located. The terminal ileum and ascending colon were empty and flat. Following up along the ileum, a mass was located that was apparently causing obstruction. It was freely movable, and the whole mass was lifted from the abdomen without difficulty. It was impossible at first to determine just how the obstruction was produced, but with gentle manipulation the mass was separated, and it was then found that a diverticulum had been tied completely around a small loop of ileum. The diverticulum sprang from the free border of the bowel, and was 13 cm. in length and 3 cm. in diameter at its base. It was perfectly free and looked like the finger of a glove. The diverticulum was removed, and the bowel closed in its long axis with three rows of sutures. An enterostomy was performed above the obstruction, and the gut emptied of gas and fluid. A catheter was sutured into the enterostomy wound, and the abdomen was closed.

The patient came off the table in good condition, but was delirious for several hours after coming out of the anesthesia. During his delirium he pulled the catheter from his enterostomy wound. This, as can be imagined, caused a lot of trouble. The intestinal contents poured from the wound, causing the sutures to let go and macerating the skin of the entire abdomen. This was finally overcome by filling the wound and covering the abdomen with sterile vaseline. With this dressing the wound healed rapidly and the abdominal skin became normal. I had expected that a secondary closure would be necessary, but fortunately the wound closed spontaneously and the patient made a good recovery.

AN UNUSUAL CASE OF HERNIA OCCURRING IN AN INFANT

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BLOOMSBURG, PA.

The following case is unusual on account of the age, and from the fact that it adds once more to the most interesting structures that have been found within the hernial sac.

Beula B., aged six months, had been a normal child from birth, well developed, and of average size. She never had been ill until three days preceding the present illness, when the mother noticed a small lump in the left groin. This gradually increased in size until the next day the child was very restless. On the third day she called the family physician, Dr. J. R. Montgomery, Sr., of Bloomsburg, who recognized that the case was one for surgery, and probably strangulated hernia. Gentle taxis was used for a few minutes before and after I saw the case, when it was decided to operate upon the child.

She was sent to the hospital and the usual incision for hernia made. The sac was opened, which was dark in color, and slightly fixed to the surrounding structures. A small quantity of dark fluid escaped, exposing a globular mass which later proved to be an ovarian tumor 4 cm. in diameter, along with the fallopian tube, both of which were twisted upon themselves and gangrenous. The tumor contained nothing but clear bloody fluid. The remaining one-third of the tube and cornu of the uterus were also pulled through the internal ring and were adherent. The tube and ovary were ligated, and raw surfaces covered over, the uterus pushed back into the abdomen, and the wound closed in the usual way for the repair of a hernia. The patient made an uninterrupted recovery, and was taken home in a week.

The first case of hernia of the ovary is reported in the writings of the Greek physician, Soranus of Ephesus, about 97 A.D. Although there is no further record of this condition in the literature for the next 1,500 years, its percentage of occurrence was probably just as high as today. The first authentic case recorded of hernia of the internal genitalia was Pol's case of hernia of the pregnant uterus reported in 1531. A similar one was reported by Sennertus in 1610. The first mention of hernia of the fallopian tube was probably made by Lavater in 1672. In 1716 Gouey observed a large hernial tumor which was probably a case of ectopic gestation.

The most complete summary of the internal genital organs of the female found in hernia sacs has been made by Dr. Leigh F. Watson of Rush Medical College, Chicago, in his book on hernias. In 1923 he collected the following cases from the literature: Ovary and tube, 175 cases; ovary alone, 156 cases; tube alone, 68 cases; the nongravid uterus, 56 cases, 23 of which contained also the ovary and tube of the same side; the pregnant uterus, 30 cases. Forty-four cases of hernia of the nongravid uterus with ovary and tube were classified according to age as follows: Under 1 year 12, 1 to 2 years 0, 2 to 10 years 0, 11 to 20 years 4, 21 to 30 years 10, 31 to 40 years 6, 41 to 50 years 6, 51 to 60 years 1, 61 to 70 years 3, 71 to 80 years 0, 81 to 90 years 2.

LABOR COMPLICATED BY A LARGE OVARIAN CYST

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WILLIAMSPORT, PA.

The patient, Mrs. K. W., a primipara aged 22, was first seen January 3, 1926. Her last menstruation began April 10, 1925, at a regular period and with the usual characteristics. She had some nausea in May and June, and felt life first the latter part of August. According to her father, a physician, there had been nothing abnormal during her pregnancy except a rather rapid and marked increase in size the past six weeks.

Her previous history was entirely negative, with the exception of an occasional attack of colicky pain low down on the right side, almost always following severe exercise. Examinations at such times showed no definite lesion, although the pain was ascribed to some appendiceal pathology. There had been none during her pregnancy. Her menses began at twelve, and were always regular, appearing every twenty-eight days and lasting five days. The first day always and sometimes the second and third had been accompanied by severe cramps.

Physical examination revealed a well-developed, stocky young woman, five feet, one inch in height, weighing 144 pounds. The teeth, tonsils, and thyroid were normal. The breasts were full and nipples flat, with a slight secretion. The heart and lungs were normal. The abdomen was unusually full and rounded, quite tense with some striæ. The uterus was tense, rotated slightly to the left, but filled both flanks and extended to the costal margins. The single fetus felt was small with its back to the mother's left. The head was dependent and showed no undue disproportion to the inlet. The heart sounds were 128, heard best in the left flank below the level of the umbilicus. Pelvic measurements were: interspinous 21.5 cm., intercristal 26.5 cm., bitrochanteric 31 cm., external conjugate 19 cm., transverse of outlet 10.5 cm. Vaginal examination showed a small introitus, rigid perineum, and deep pelvis. The promontory was not reached. The cervix was central, soft, and nonpatulous. A fetal skull was floating at the pelvic brim. The blood pressure was 138/80. The urine was free from albumin, sugar, and casts. Subsequent examinations showed no change except apparent subsidence and partial engagement of the head on January 20th.

Labor began at 4 a.m. on January 25th. Pains were active from the onset, but examination at 9 a.m. showed only two fingers' dilatation and head not yet fixed. Between then and evening the pains were partly controlled by two doses of morphin and atropin, but by midnight they were very severe, bearing down, and accompanied by a slight bloody discharge. At that time there was almost complete effacement and dilatation, but the sagittal suture was transverse. Rectal analgesia (Gwathmey) was attempted, and the membranes were ruptured.

Soon after this, it was noted that the uterus had been pushed far over to the left, and a soft fluctuating mass became apparent on the right. It was distinct from the uterus, very tender, and not affected by catheterization. By 4 a.m. the effects of the instillation had worn off, and it was decided to terminate the labor. By means of a medium high application of forceps, with the head in a left occipito-anterior position, and episiotomy, a baby girl weighing 6½ pounds was delivered.

The patient was badly shocked following delivery, necessitating the use of hyperdermoclysis and cardiac stimulation. However, she rallied in six hours, but complained of severe pains in the right side. A large cystic mass could now be easily palpated to the right of and behind the

contracted uterus, which was pushed far over into the left flank. The tumor occupied the entire right flank, and extended to the liver margin.

By the third day postpartum the temperature had risen to 102°, and continued from then on fluctuating between 100° and 103°. The mass became slightly larger and very tender. There was a great deal of abdominal pain, and some evidence of peritoneal involvement. Cystoscopic and x-ray examination excluded the possibility of a large hydronephrosis.

On the twenty-first day postpartum, laparotomy revealed a large unilocular cyst of the right ovary, the size of a seven-months' pregnancy. It was adherent in places to the under surface of the liver and the parietal peritoneum. Also there were several irregular-sized areas of inflammation and necrosis on its surface, and the pelvis contained a considerable amount of free cloudy fluid and plaques of fibrin. Because of its size it was necessary to evacuate the cyst before the adhesions could be dealt with and the sac extirpated.

Following her operation, the temperature was controlled and the patient made a satisfactory recovery, being discharged on the fourteenth day. At the present writing both mother and baby are in good health. A slight left facial pressure palsy of the baby has resolved, and the mother's menstruation has been reëstablished without the previous cramps, nor has she had any more attacks of colicky pain in the right side after exercise.

This case is reported because of the size of the cyst and its nondiscovery prior to labor. Microscopically, it was the "usual papillomatous cyst of the ovary, nonmalignant, showing areas of necrosis" which were due, no doubt, to trauma. It was undoubtedly present but small prior to pregnancy, the stimulus of which probably caused its rapid increase in size. The full-term uterus, lying anteriorly, prevented its detection by abdominal palpation and also by pushing it out of the pelvis, prevented its detection by pelvic examination—facts to be borne in mind when a small cyst is known to be present prior to or early in pregnancy, since it may be impossible later to determine exactly any increase in size. These facts may also excuse, if excusable, the inability to differentiate this condition from an hydramnios, which it was thought to be in this case prior to the rupture of the membranes.

In retrospect, it seems remarkable how much trauma the thin-walled cyst was able to withstand without rupture; also how great an obstacle the forces of labor were nearly successful in overcoming. Undoubtedly a cyst of this size, even without the reduction in pelvic measurements, would be a clear indication for cesarean section; but at the stage of labor and with the previous interference before discovery, vaginal delivery seemed much the safer course in this case.

REPORT OF FOUR CASES OF CONGENITAL PYLORIC STENOSIS

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Congenital stenosis of the pylorus is a condition which usually first gives symptoms during the early weeks of infancy. About 50 per cent of the cases show their first indication of the disease between the fourth and fourteenth days; about 25 per cent during the second and third week; and about 25 per cent from the third to the sixth week. The disease is first indicated by recurrent vomiting in an infant who has previously been normal. The vomiting increases so that no food is retained at any time. There is rapid emaciation, and unless there is some interference the patients are reduced to mere skeletons. These infants are usually always hungry and will take any food that is offered. There are no signs of other illness—no temperature rise, and the only symptoms are the continued vomiting, rapid loss in weight, weakness, and constipation. There is frequently a peristaltic wave noticed in the upper abdomen passing from the left to the right. Sometimes there is a palpable elongated tumor in the epigastrium.

The four cases which we report showed to a greater or less extent practically all of these symptoms. There were three male patients and one female patient, the condition occurring in a much greater percentage of boys than girls. The first, second, and fourth patients made rapid and complete recoveries. The third, who was eleven weeks old, died from shock nine hours after operation. This bears out the accepted theory that if recognized early and operated upon, there should be no mortality from this comparatively simple operation.

CASE 1. Male infant, aged 5 weeks. Operated upon January 26, 1926. The baby had been apparently normal until fifteen days old. At that time he began to vomit one to two feedings a day, and occasionally vomited more food than had been taken at the last feeding. Several changes of food were made without any improvement.

On admission to the hospital he was very much emaciated, his skin was dry and wrinkled, he was very restless, and showed evidence of dehydration. The abdomen was not distended, and no mass could be palpated, but there was very marked peristalsis in the upper abdomen, beginning at the left and traveling to the right. There was continual vomiting.

Case 2. Male infant, aged 6 weeks. Operated upon March 13, 1926. This baby was apparently normal until about nine days before admission to the hospital, or four and one-half weeks of age, when he began to vomit after every few feedings. The vomiting was projectile and in large quantities. The bowels were obstinately constipated, and he began to lose weight rapidly. A change in food was made several times, with no improvement, about three feedings being retained before the baby would vomit the entire amount. This baby was not so markedly emaciated as the others, but showed some loss of weight and lack of fluids. An elongated palpable tumor was found in the epigastrium, and very marked peristalsis could be observed.

Case 3. Female infant, aged 11 weeks. Operated upon July 13, 1926. This was the most emaciated of all the four patients, and also the oldest baby. The history in this case is that vomiting had continued over a much longer period, having come on earlier in infancy than is usual in the majority of cases of stenosis. For a time the child had shown improvement under medical care and change of diet. On admission she could retain nothing except small amounts of slightly sweetened water. Emaciation and dehydration were extreme, and she was almost moribund when admitted to the hospital.

Case 4. Male infant, aged 2 months. Operated upon September 14, 1926. The history in this case is that the baby was apparently normal until about six weeks of age, when he began to regurgitate some food. This regurgitation increased until at the time of operation the child was not able to retain anything. There was some emaciation, the child was very fretful and hungry, and was beginning to show the usual symptoms of stenosis. On one occasion a small mass had been palpated in the upper right abdomen, but this mass could not be felt on subsequent examinations.

The operation was practically the same in each case. No general anesthetic was administered, but infiltration with one-fourth of one-per-cent novocain was used. After entering the peritoneum through an upper right-rectus incision, the pyloric third of the stomach, pylorus, and first portion of the duodenum were delivered through the incision, and the remainder of the abdomen protected with gauze.

In case 1 the stomach was dilated and the pylorus was a hard cylindrical mass seven-eighths of an inch long and about three-fourths of an inch in diameter. In case 2, the thickened pylorus was three-fourths of an inch long and half an inch in diameter. In case 3 the thickening of the pylorus was about one inch long and three-fourths of an inch in diameter, and extended farther on the stomach and duodenum than in the other cases. In case 4 the mass in the pylorus was one inch long and three-fourths of an inch in diameter. It extended half an inch toward the stomach and half an inch toward the duodenal side. These masses were hard, indurated, and no lumen could be palpated from either end.

The Straus modification of the method of Rammstedt was used in which the serosa and muscularis were incised longitudinally, the incision being carried just to the mucosa and just as far longitudinally as the hypertrophy extended. On dividing the last fibers of the muscularis, the mucosa bulged up through the incision.

One very important point in the operation is to divide all of the muscular fibers, and not to puncture the mucosa. If the muscular fibers are not all divided, or if the incison is not carried far enough on the gastric end and far enough on the duodenal end, the result will not be a success. On the other hand, if the incision is carried too far, there is great danger of puncturing the mucosa, especially on the duodenal end where the wall of the intestine becomes very much thinned out.

After completely severing all of these fibers, the bleeding points were controlled by pressure, and in but one instance was it necessary to ligate any bleeding point. After all oozing had been controlled, the stomach, pylorus, and duodenum were dropped back into the abdominal cavity without any attempt at closure of the incision in the pylorus. (A follow-up of these cases does not give any evidence of adhesions.) The parietal peritoneum was closed with fine plain catgut, the fascia with chromic catgut, and the skin with dermal sutures. All the incisions healed without any infection, and the longest time that any of the infants spent in the hospital was nine days.

The first, second, and fourth cases were able to retain water and barley water in one-ounce amounts three hours after operation. This amount was increased on the second day, so that the infants were having three ounces of barley water with an occasional feeding of a milk formula every three hours during the second twenty-four hours. There was gain in weight in each case from the time of operation, averaging one ounce a day. One baby had postoperative vomiting of a dark material for twelve hours, which was probably due to a localized edema. Two of the four patients had hypodermoclysis of 50 cubic centimeters of saline solution after operation, and all had enteroclysis of 5-per-cent glucose solution until it was considered that the infants were taking sufficient fluid by mouth.

The final check-up on the three cases shows that each child has continued to gain in weight and has shown no evidence of recurrence of the stenosis.

I am indebted to Dr. Harvey F. Smith for these cases under whose service they were admitted to the hospital.

510 North Second Street.

COMMINUTED FRACTURE OF THE ILIUM WITH RUPTURED KIDNEY

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A miner, aged 33, was caught in a fall of top rock, causing an injury to the back and pelvis. Examination disclosed a condition of severe shock, bloody urine, and ecchymosis in the right lumbar region.

The diagnosis was fracture of the spinous process of the second lumbar vertebra and of the transverse process of the fifth lumbar vertebra, right lateral luxation of the fifth lumbar vertebra, comminuted fracture of the right ilium, and rupture of the right kidney.

At operation, the kidney was explored, a split on the anterior surface extending into the pelvis was sutured, and the fossa packed. This was followed by transfusion. Recovery ensued.

The interesting phase of this case was shown by the x-ray films, which revealed the ascending colon filled with air and displaced internally to the bodies of the vertebra by the retroperitoneal collection of fluid. As a diagnostic aid in this instance it was unnecessary, but in cases of suspected kidney rupture without much ureteral discharge of blood, the dilatation of the colon by air before x-radiation would be a very useful procedure.

Clinical Report*

BOECK'S SARCOID OF THE SKIN, WITH CONSTITUTIONAL SYMPTOMS

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A patient, 52 years old, came to us in July, 1926, complaining of weakness and of peculiar pigmented nodules which he had first observed two months previous. These nodules were in the ears and over the trunk, and are still present. Physical examination revealed two outstanding features: first a peculiar duskiness of the facies which blended with the violaceous tint of the skin; second, the patient was fatigued, a slight cough was present, and the heart sounds seemed distant and feeble. The blood count showed 5,830,000 red cells and 12,400 white cells, and the differential was: polymorphonuclears 58, large mononuclears 5, small 35, and eosinophils 1 per cent. I had never seen a combination of this sort, and owing to the slight polycythemia, the question arose as to whether this could be a mild form of this disorder. There was no enlargement of the spleen.

On August 18th the patient again came under observation, and at this time a new group of lesions was present. He had developed a productive cough and a bilateral effusion, a slight edema of the legs was present, and he had had an attack of slight hemoptysis. Examination of the sputum for tubercle bacilli was negative, and the roentgenogram was negative except for confirmation of the bilateral effusion. Dr. Sidlick of the dermatologic department was asked to see the patient, and he said that it was a case of Boeck's sarcoid. A section was obtained from one of the lesions and found to be absolutely typical.

On August 31st the chest was aspirated and 1,056 c.c. of dark brown fluid removed. A guinea pig was inoculated, but to date nothing has happened. Examination of the fluid failed to reveal any tubercle bacilli. To date, approximately 3,500 c.c. of fluid has been aspirated from the right side and 600 c.c. from the left side of the chest. The blood chemistry has shown a slight increase in the uric acid. On October 11th it was 6.2, and the urea nitrogen 42 mg. per 100 c.c. of blood. The urine has shown an occasional trace of albumin, but the outstanding feature has been the presence of calcium oxalate repeatedly.

The question has been raised as to whether the cutaneous lesions are those described by Boeck as sarcoid, or whether they are the cutaneous lesions of tuberculosis, since many cases of the latter disease have been reported. All patients with Boeck's sarcoid have not developed the tubercle bacilli. The literature on sixty to seventy cases has been studied, which shows that tubercle bacilli have not always been demonstrated, but that occasionally there has been a combination of renal-vascular disease. It is problematical whether these cases of Boeck's sarcoid are not really due to a constitutional disease with this peculiar cutaneous manifestation.

DISCUSSION

DR. DAVID M. SIDLICK: Skin diseases like Kaposi's hemorrhagic sarcoma and a few other conditions were at one time all designated as sarcoid. This is due to the fact that they have a remote resemblance to sarcoma, although they are not true sarcoma. When he first described this condition, Boeck named it multiple lupoid because of the striking resemblance to tuberculosis. The name of Boeck's sarcoid has persisted nevertheless.

The cases are interesting because of the constitutional evidences of disease. While many persons have associated this affection with tuberculosis, it is far from

* Abstract of paper presented at the clinical meeting of the Section on Medicine of the Medical Society of the State of Pennsylvania, held at the Philadelphia General Hospital, October 13, 1926.

being proved as yet, for just as many cases have failed to show tubercle bacilli as have shown them. Many other definite constitutional manifestations have been found, as in the case just presented.

QUESTION: Can the level of the fluid be seen grossly?

DR. BERNSTEIN: The fluid level is very definite.

QUESTION: What is the pathology?

DR. BERNSTEIN: Occasional giant cells and lymphoid and epithelial cells are found, usually not situated around the blood vessels. This has raised a question as to whether the nodules are associated with tuberculosis. The lesions never ulcerate, and there is no apparent discomfort—nothing except the unsightliness.

Dr. Derby reported a case with lesions in the eyelid, which seems to be the only one on record. This case seems to be the second, with one lesion on the eyelid.

Symposium on Bronchial Asthma*

HYPERSENSITIVE PHENOMENA

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When any soluable foreign substance enters an animal organism, it either has no effect on the organism and is eliminated unchanged, or it produces some definite and constant alteration in the animal. This action may be beneficial, for example the foods, or it may be injurious, like the toxins. Whatever the action is, it is constant, not only for the species but for all species. For example, the action of digitalis on heart muscle is common to all animals. This is the usual action of foreign substances. The extent of the action and the dose required may vary with different species and in certain individuals of the same species, but the action is always essentially the same.

There is another action, an unusual action, which is manifest only in certain species or in certain members of a species. This unusual reaction is hypersensitiveness, and it is impossible to produce the reaction except in a susceptible individual. Poison ivy is harmless for animals, and yet in the majority of humans it produces dermatitis. Similarly, a single injection of horse serum in animals produces no exterior effects, but in 90 per cent of humans there follow the well-known phenomena of serum disease. These unusual actions are spoken of as hypersensitiveness, and the two instances just given are considered normal because they occur in the majority of the human race.

Abnormal hypersensitiveness occurs either artificially or spontaneously in only a portion of a species. Tuberculin is a harmless substance in any animal not infected with the tubercle bacilli, but in such an infected animal there is a hypersensitive reaction which is quite apparent.

Anaphylaxis is an example of artificially produced hypersensitiveness. In this condition, repeated doses of such a harmless substance as egg albumen produce certain very definite symptoms which, however, vary in different species, but are constant for each species. All anaphylactic phenomena are due to the interaction of a foreign substance on antibodies which have been produced as a result of previous doses of that substance.

Certain members of the human race exhibit unusual or hypersensitive reactions. The substances producing these reactions are usually quite harmless to other humans and to animals, and often were at one time easily tolerated by the affected individual. This reaction is a transitory edema of the skin or mucous membrane, and at times involves the underlying tissues. It may appear in any part of the skin or mucous membranes, but the reaction to a given substance in a particular individual is constant. The usual sites of the reaction are in the bronchi, nose, and skin, producing respectively asthma, hay fever, and urticaria.

This hypersensitiveness has been called atopy, and the foreign substances producing it, atopens. It differs from anaphylaxis in a number of essential features, chief among which are its spontaneous development in only certain members of the race, its complete independence of the antigen-antibody reaction, the variability of the symptoms, and the well-established hereditary factor.

In atopy there have been discovered certain bodies in the circulating blood by means of which it is possible to transfer the skin reaction of atopic individuals to the skin of a normal person. These bodies have been named atopic reagins by Coca. They occur in the blood stream of asthma and hay-fever patients, and if the blood serum containing these bodies be injected into a site in a normal skin, this site, when tested with the substance to which the donor of the blood reacted, will give a typical skin reaction *only* at that site. So far, no one has been able to demonstrate these reagins except in a normal skin.

When mixed with a solution of its specific atopen (the substance which gives the skin reaction in the donor of the serum), no physical changes such as precipitation take place, but the reagins are neutralized in the serum without producing any recognizable loss of atopen. In other words, serum which has been mixed with

*Read before the Section on Medicine of the Medical Society of the State of Pennsylvania, Philadelphia Session, October 12, 1926.

the appropriate atopen loses its power to sensitize a normal skin, but the atopen does not lose any strength during the neutralization—analagous to catalytic action.

Furthermore, a neutralized reagin is absolutely nontoxic. When the serum is injected into a normal skin site which has previously been injected with some of the atopen, no reaction takes place either at the time of the injection of the serum or when the site is subsequently tested with the atopen. Thus we have the neutralization of the atopen *in vivo* without the production of any reaction. This means that the reagins must be in contact with a skin cell in order to react to the atopen.

The part played by these reagins in the production of clinical manifestations of human hypersensitiveness is not understood, and the experimental evidence at hand is very confusing. Reagins have been found in the blood of all persons suffering from asthma and hay fever in whom there is a positive skin reaction to a substance to which the patient is clinically sensitive. In hay fever the strength of the reagins in the blood is comparable to the strength of the skin reaction. This is not true of asthma, the skin reaction usually being stronger than the blood-serum reagins. After hyposensitizing a hay-fever patient by means of the familiar pollen injections up to the point of almost complete clinical relief, the reagin content of the blood is the same as before treatment was started. Furthermore, the reagin content when titrated by sensitizing a normal skin with dilutions of the serum gives no indication of the severity of the clinical symptoms. We have watched a girl through the past hay-fever season in whom a ragweed reaction was discovered before the season. There were typical reactions in the skin and eye, and reagins were demonstrable in the blood serum when diluted 1 : 80. No treatment was given, and yet nothing comparable to true hay fever developed.

On the other hand, we see typical hypersensitive phenomena proved to be due to a specific external irritant without the presence of reagins in the blood—as the quinin-sensitive woman reported by Coca.

There are other factors which play a rôle in hypersensitive phenomena in humans for which there is no real explanation. The most important of these is infection with pyogenic organisms. Frequently the infection is not in the same part of the body as the manifestations of the hypersensitiveness. Infection in the paranasal sinuses and teeth are well-known aggravants of asthma, and at times seem to be the sole cause. However, it must be remembered that similar infection is frequently seen without any asthma. On the other hand, infections in the prostate or gall bladder seem to have little effect. Efforts to prove that such asthma is evidence of hypersensitiveness to the products of infection have not been successful.

Barometric changes have an effect on asthma. This is a clinical fact which cannot be denied, and yet there is no explanation for it. The more one sees of asthma the less one feels that it is at all dependent upon the mental state of the sufferer. Most of the arguments in favor of such an hypothesis are easily explained on a rational hypersensitive basis.

In woman the generative functions have a decided influence. Menstruation usually aggravates. Pregnancy often produces a total disappearance of all symptoms, although it may aggravate. One woman with a typical case of hay fever had no symptoms whatever through two successive seasons that she was pregnant. Both before and after these two seasons the hay fever was of usual severity. The skin and eye reactions were typical and response to treatment was very satisfactory.

Another woman has been pregnant four times since the onset of her asthma. She went to term the first time although suffering greatly, but has aborted the last three times because of the severe dyspnea and cough. Her's is a typical hypersensitive case, feathers being the cause of her trouble.

At the present time these are simply interesting facts. The study of those hypersensitive phenomena which are dependent upon the formation of antibodies resulted in the acquisition of much useful knowledge and some very important clinical tests, such as the Wassermann and Widal reactions. At present, our knowledge of reagins is very fragmentary, but it is hoped that their study will open up new lines of thought and investigation which will not be confined to bronchial asthma.

DISEASE OF THE UPPER RESPIRATORY TRACT IN RELATION TO THE ETIOLOGY AND TREATMENT OF BRONCHIAL ASTHMA

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AND
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Since the time of Voltolini,[1] who in 1871 reported the cure of a single case of asthma by the removal of a nasal polyp, disease of the upper respiratory tract has been thought capable of producing bronchial asthma. The expected

wave of enthusiasm which followed his observation resulted in promiscuous surgery on the nose and elsewhere, with the result that all such procedures fell into natural disrepute.

For many years little therapeutic progress was made because nothing of importance was contributed to the knowledge of the etiology of asthma until Meltzer[2] in 1910, appreciating the analogy between anaphylaxis experimentally produced in animals and an attack of bronchial asthma, first suggested that the asthmatic paroxysm was probably an expression of human anaphylaxis. Although time has modified this opinion, it furnished the impetus for the study of allergy and those diseases which are now known as the allergic disorders.

Following Meltzer's observation, Goodale, Walker, Cooke, and many others, built the foundation on which the modern school of allergy stands, with the inevitable result that the impression prevailed that the diagnosis of all cases of asthma was determined by cutaneous or intracutaneous tests with a variety of materials, and that all were due to specific hypersensitiveness to one or more particular substances, usually protein in nature. Those patients whose skins were disappointingly negative were either considered allergic anyhow, with the specific substance still undetermined, or were diagnosed asthmatic bronchitis and treated with a vaccine.

The unsatisfactory results obtained clinically by those holding this point of view caused the pendulum to swing once more, with the result that attention is again being directed to the upper respiratory tract, disease of which is capable of producing bronchial asthma, and eradication of which frequently results in improvement or even cure.

In a word, then, the present investigation of asthma demands a proper consideration of allergy, and in addition a competent survey of the upper respiratory tract. No case of asthma is properly studied if allergic tests alone are made. Cutaneous sensitivity does not always mean that the disease is caused by those substances capable of producing a positive reaction. They may only indicate a predisposing cause, and the exciting cause may be obstructive nasal lesions, infection of the paranasal sinuses, or both.

It is not within the scope of this presentation to consider in any detail the *modus operandi* whereby nasal pathology produces bronchial asthma or other pulmonary pathology. Gottlieb[3] believes that it may be produced in the following way: (1) By direct extension, purulent droppings from the pharynx directly infecting the tracheal and bronchial mucous membrane. (2) By blood-stream or lymphatic absorption from an area of infection, producing an allergic phenomenon manifesting itself in asthma. (3) By mechanical nasal obstruction causing mouth-breathing, thereby rendering the bronchial mucous membrane more permeable to infection. (4) By producing a nerve reflex by irritation or disease of the nasal ganglion, according to the mechanism described by Sluder.

Mullin[4] has very recently published the results of his experimental work on the relation of paranasal-sinus infection to disease of the lower respiratory tract. He studied this problem by injecting suspensions of India ink into the maxillary sinuses of rabbits and following the course of the carbon deposits from the site of injection to the subaxillary nodes, internal jugular nodes, the lymph ducts, the great veins, the right side of the heart, and the lungs. In none of these experiments were the faucial tonsils affected. He believes that there is abundant clinical and some experimental evidence in support of the statement that certain types of disease of the paranasal sinuses tend to produce peribronchial infection with resultant chronic bronchitis, bronchiectasis, and asthma.

The diseases of the upper respiratory tract which we have found present in many cases of asthma, and those which we consider of direct etiologic relationship are: (1) Infection of the paranasal sinuses, chiefly of ethmoids, sphenoids, and maxillaries, often associated with the presence of nasal polypi; (2) hypertrophy of the turbinated bodies, particularly of the middle turbinates, unilateral or bilateral, in firm contact, especially in their posterior portion, with the nasal septum.

Mullin's experimental work would seem to offer a logical explanation for the occurrence of bronchial asthma from infection of the paranasal sinuses. Irritation of the nasal ganglion, producing a reflex through the cervical sympathetic nerve, and thence through the vasomotor fibers of the bronchi, may explain the production of bronchial asthma from the presence of obstructive nasal lesions. In substantiation of this view, two patients have been observed in whom the passage of a nasopharyngoscope immediately produced an asthmatic paroxysm.

The incidence of disease of the upper respiratory tract in asthma varies greatly in the published statistics of various clinics. This is due in part to an individual's conception as to what constitutes nasal pathology. Shambaugh[5] states that those who look upon asthma purely as a nasal-reflex neurosis capable of being set up by irregularities of the nasal septum, turgescence of the turbinated bodies, and hypersensitive areas scattered here and there over the nasal mucous

TABLE I. SUMMARY OF TWENTY-FOUR CASES OF DISEASE OF THE UPPER RESPIRATORY TRACT

	Age	Sex	Duration of disease (years)	Preoperative diagnosis	Operative procedures	Result	Comment
Case I	33	F	14	Bilateral turbinate hypertrophy	Bilateral middle turbinectomy	Cured	Allergic to house dust.
Case II	47	F	12	Bilateral turbinate hypertrophy	Bilateral middle turbinectomy	Improved.	
Case III	35	M	30	Deviated septum; hypertrophy left middle turbinate; polypi	Submucous resection; left middle turbinectomy; polypi removed	Improved	Allergic.
Case IV	39	F	22	Bilateral turbinate hypertrophy; polypi	Bilateral middle turbinectomy; polypi removed	Cured.	
Case V	15	M	2	Hypertrophy left middle turbinate; maxillary sinusitis	Left middle turbinectomy	Improved	Four operations subsequently for extensive sinusitis.
Case VI	50	F	9	Right maxillary sinusitis; bilateral spheno-ethmoiditis	Drainage right antrum; bilateral spheno-ethmoidectomy	Improved	Highly allergic to house dust, dog hair, etc.
Case VII	38	M	18	Deviated septum; hypertrophy left middle turbinate; polypi	Submucous resection; left middle turbinectomy; polypi removed	Improved	Hay fever, hay asthma, nonseasonal asthma.
Case VIII	42	F	8	Bilateral hyperplastic ethmoiditis; bilateral maxillary sinusitis; polypi	Bilateral middle turbinectomy; drainage maxillary sinuses; polypi removed; exenteration spheno-ethmoid sinuses	Unimproved	Clinical evidence of extensive sinusitis still present.
Case IX	25	M	6	Pansinusitis; nasal polypi	Polypi removed; bilateral middle turbinectomy; right spheno-ethmoid exenteration	Improved	Sinusitis still present.
Case X	18	F	10	Hypertrophy right middle turbinate; left maxillary sinusitis	Right middle turbinectomy	Unimproved	Sinus operation refused.
Case XI	37	M	3	Nasal polypi	Polypi removed	Unimproved.	
Case XII	43	M	18	Right middle-turbinate hypertrophy; right maxillary sinusitis	Right middle turbinectomy; drainage right maxillary sinus	Unimproved	Postoperative hemorrhage; ligation of external carotid.
Case XIII	40	F	5	Hypertrophy right middle turbinate	Right middle turbinectomy	Cured.	
Case XIV	37	F	13	Right spheno-ethmoidal sinusitis	Exenteration right spheno-ethmoid	Unimproved.	
Case XV	24	F	1	Left middle-turbinate hypertrophy; hyperplastic ethmoiditis (I); right maxillary sinusitis	Left middle turbinectomy; exenteration left ethmoids	Unimproved.	
Case XVI	46	F	3	Bilateral turbinate hypertrophy	Bilateral middle turbinectomy	Improved	Hay fever, hay asthma, nonseasonal asthma.
Case XVII	42	F	6	Bilateral turbinate hypertrophy	Bilateral middle turbinectomy	Improved	Well for two years after operation. Recent recurrence coincident with recurrence of nasal pathology.
Case XVIII	28	M	1	Bilateral turbinate hypertrophy; bilateral maxillary sinusitis; bilateral ethmoiditis	Bilateral turbinectomy; drainage maxillary sinuses; exenteration ethmoid sinuses	Cured	Well 21 months after operation.
Case XIX	35	M	3	Pansinusitis	Drainage and exenteration of all sinuses	Unimproved	Ten sinus operations.
Case XX	28	F	28	Hypertrophy right middle turbinate	Right middle turbinectomy	Improved	Allergic to dust, horse dander, etc.
Case XXI	33	F	12	Bilateral turbinate hypertrophy	Bilateral middle turbinectomy	Cured.	
Case XXII	54	F	2	Bilateral turbinate hypertrophy; bilateral maxillary sinusitis; right ethmoiditis	Bilateral middle turbinectomy; drainage of maxillary sinuses; right ethmoidectomy	Improved.	
Case XXIII	19	M	19	Nasal polypi	Polypi removed	Improved	Allergic to feathers, etc.
Case XXIV	50	M	10	Nasal polypi pansinusitis	Polypi removed	Improved	Further surgical treatment declined.

membrane, will always find an abnormality to explain asthma. The other extreme is exemplified by the ultra-allergist who does not have nasal examinations made.

In a recent paper by one of us,[6] in collaboration with Dr. T. Grier Miller, on the effects of ephedrin in bronchial asthma, it was found that of 59 cases observed, 19 were purely allergic, 28 were infectious, 9 exhibited both allergy and infection, and 3 were considered to have nasal

pathology of the reflex nasal type. Of the 59 cases, therefore, 37 had definite infection (63 per cent). Of these 37, infection was demonstrated in the paranasal sinuses in 29 (78 per cent). In none of these cases, and in none of those which comprise the present report were other infective foci (excepting in the bronchi) consistently found or proven of etiologic importance, and we have yet to see the first asthmatic relieved either by tonsillectomy, biliary drainage, prostatic massage, or wholesale dental extractions.

This report comprises a group of 24 patients studied by both of us and operated upon by Dr. Fetterolf. This is the number whom it was possible to trace, and from whom replies were received. See Table I, which states the age and sex of the patients, the duration of the disease, the preoperative diagnosis, the operative procedures, and the results to date.

In addition to disease of the upper respiratory tract, 10 cases exhibited convincing evidence of allergy (42 per cent).

Table II. Pathologic Conditions Found in Twenty-four Cases of Asthma

Polypi (alone)	2
Polypi (with other disease)	10
Turbinate hypertrophy (unilateral)	4
Turbinate hypertrophy (bilateral)	4
Turbinate hypertrophy and sinusitis	7
Sinusitis (alone)	6
Pansinusitis	4
Maxillary sinusitis (unilateral)	6
Maxillary sinusitis (bilateral)	4
Ethmoiditis (unilateral)	4
Ethmoiditis (bilateral)	4
Sphenoiditis (unilateral)	2
Sphenoiditis (bilateral)	3

Table II summarizes the pathologic conditions found in the 24 patients observed. Their total number greatly exceeds the number of patients for the reason that one patient frequently exhibited multiple lesions.

Results

It must not be expected that this small group of cases is of value from a statistical standpoint. However, certain general statements may be permitted.

Of this group, 5 expressed the opinion that they were cured; 4 have been free of recurrence from 1½ to 3 years; 12 were improved; and 7 unimproved.

Of the 5 considering themselves cured, 4 were of the reflex nasal type, 3 had bilateral turbinate hypertrophy, 1 had unilateral hypertrophy with septal contact. The remaining case, which is well at the end of two years, had bilateral turbinate hypertrophy and bilateral ethmoiditis.

Of the 12 patients improved, 8 had obstructive nasal lesions; of these, 2 also had sinus disease. One had nasal polypi, and the remaining 3 in this group had extensive multiple sinus infections.

Of the cases unimproved, all but one had extensive disease of the paranasal sinuses. The remaining case had nasal polypi—suggestive evidence at least of sinus infection.

Summarizing these results, it may be said that patients with the reflex nasal type of asthma (unilateral or bilateral turbinate hypertrophy with septal contact), where this condition exists without concomitant disease of the paranasal sinuses, can confidently expect to be cured or greatly relieved by appropriate nasal surgery.

Those whose asthma is the result of infection of the paranasal sinuses have a much less favorable prognosis. Almost always the sinus infection is multiple, and usually the spheno-ethmoid cells are diseased. These facts mean multiple operations and difficult surgery, taxing to the limit the fortitude of the patient and the skill of the rhinologist.

Ethmoiditis with hyperplasia of the lining mucosa, the commonest form of sinus infection provocative of asthma, is extraordinarily difficult to cure, even by the most radical surgery consistent with the safety and welfare of the patient.

We are in accord with Mullin, who believes that when the sinuses are involved by hyperplastic processes, one cannot expect that any prolonged amelioration of asthmatic symptoms will follow any other treatment than the surgical removal of the hyperplastic tissue, with this reservation: that there is no known method of surgery capable of removing all hyperplastic tissue, especially when the spheno-ethmoid sinuses are extensively involved.

In one of the few cases of extensive sinus diseases there were such happy results from surgical treatment that it seems worthy of mention.

Case Report

Mrs. F. M. B. (Case VI), aged 50, had suffered from frequent colds and chronic bronchitis for many years. She had her first attack of asthma nine years ago, which apparently followed a very heavy cold. She had been under treatment successively in New York, California, New Mexico, Colorado, and North Carolina without relief. At the time of her admission to the University Hospital in July, 1925, she was extremely emaciated, weighing 72 pounds. The asthmatic attacks were of unusual severity, both as to the degree of bronchial obstruction and duration. During a period of six months' observation the longest interval between attacks was ten days. In several instances, she was almost continuously asthmatic, and under intensive medication for seven successive days, requiring at times from fifteen to twenty-one hypodermic injections in twenty-four hours, most of them, except opiates, ineffectual.

Protein tests were strongly positive to house dust, orris root, dog hair, and pyrethrum. Examination by

Dr. Fetterolf revealed bilateral ethmoid-sinus disease, and the x-ray examination by Dr. Pancoast showed dense clouding of both ethmoid regions and the right maxillary sinus. In order to determine the part played by the allergic factor, as evidenced by the positive cutaneous tests, all of those substances to which the patient reacted were readily removed from her environment except house dust, and this factor was removed as far as possible by placing the patient in a room for three days where the air was continuously washed and free of dust. This special room has been previously described.[7] During the time the patient was in the room, asthma continued with unabated severity. The maxillary sinus was drained, and subsequently bilateral ethmoid exenteration was done. At the present time, one year later, this patient weighs 110 pounds and is almost entirely free of asthma. She has required no medication for the past ten months.

This case is one of asthma occurring in one of allergic strain because of acquired sinus infection. It illustrates, in this particular patient, the unimportance of positive skin tests as an index of etiology, and the tremendous importance of the infectious aspect of the case, judged by the gratifying results of sinus surgery.

Summary and Conclusions

I. This presentation is offered as evidence in favor of the opinion that disease of the upper respiratory tract is an important factor in the production of bronchial asthma. The chief pathologic findings in this group of cases were: (1) obstruction of the posterior nares by turbinate hypertrophy with septal contact, unilateral or bilateral, producing the so-called nasal-reflex asthma; (2) infection of the paranasal sinuses, producing the phenomenon of the asthmatic paroxysm, probably by lymphatic absorption with extension from the infective focus to the lungs; (3) nasal polypi usually associated with other nasal pathology.

II. Cure or substantial improvement can confidently be expected from appropriate surgery in asthma of the reflex nasal type. A much less favorable prognosis must be given those in whom there is extensive infection of the paranasal sinuses, particularly if the spheno-ethmoid cells are implicated. Spheno-ethmoid surgery is far from being a dependable procedure because the closeness of vital structures predisposes to conservatism, and anatomic variations introduce indeterminable factors; also because the already established tendency to tissue hyperplasia predisposes to recurrence of such tissue removed at operation. This, plus reinfection explains the recurrence of symptoms after variable periods of postoperative improvement.

III. Either allergy alone, disease of the upper respiratory tract alone, or both may be the cause of asthma in any given case; therefore, both factors must be investigated.

IV. No case of asthma has been properly studied unless it has been examined with particular reference to the posterior portion of the middle turbinates from the reflex standpoint, and the paranasal sinuses, particularly the spheno-ethmoids and maxillaries, from the infectious standpoint.

No method of acquiring information should be neglected, and the examinations should include transillumination, x-ray studies, and several careful examinations with the nasopharyngoscope. Only by the use of this last instrument can accurate data be secured about the upper posterior regions of the nose and its accessory cavities.

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THE INTERPRETATION OF SKIN TESTS IN THE DIAGNOSIS OF BRONCHIAL ASTHMA*

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When the allergic nature of certain diseases—asthma, hay fever, vasomotor rhinitis, some types of eczema, and others—became recognized a few years ago, skin testing was hailed as a valuable addition to our diagnostic armamentarium, and such it has indeed proved to be. However, among many physicians the idea gained ground that skin testing offered an accurate means of examination, comparable qualitatively and perhaps quantitatively to other diagnostic procedures, such as the Wassermann test for syphilis, or the Widal reaction in typhoid fever. In this concept they have been sorely disappointed. Many discrepancies have been found between the skin reactions, on the one hand, and the clinical picture and therapeutic results on the other; discrepancies which have led the unskilled into error and which have shaken the faith of many in the value of the method. The proper interpretation of skin tests and their limitations are the subject of this discussion.

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What has a widened experience taught us of the significance of skin reactivity in human hypersensitiveness? Briefly this: that skin reactivity does not parallel either the intensity or the type of the clinical picture presented by the patient. Skin hypersensitiveness is one manifestation of general hypersensitiveness. Fortunately for us, it usually accompanies hypersensitiveness of other parts of the body, for instance the nasal or bronchial mucosa, but it may be greater or less in degree, or perhaps, wholly absent, or it may be present alone, without clinical manifestations of hypersensitiveness elsewhere. These various combinations give rise to obvious difficulties.

Skin reactivity is not proportional to the severity of the clinical picture. Of two asthmatics, both sensitive to horsehair, the one may give a very markedly positive skin reaction to horsehair protein, while the other reacts only very slightly. Therefore, we cannot judge the severity of the disease by the result of the skin test. What is more important, it makes it more difficult to decide what to call a positive reaction. Writers, in describing a method of testing, for example the cutaneous, are in the habit of defining a positive reaction as one in which there is a wheal at least five millimeters in diameter, usually with a surrounding zone of erythema, appearing and reaching its maximum within half an hour. Most typical positive reactions meet these requirements, and are often much larger than this minimum, especially in the pollen cases, and often in those sensitive to feathers or hair. But in some individuals the reactions are very slight, the wheal being only 3 or 4 millimeters across and with very little erythema, or no wheal being present and only a zone of erythema a centimeter in diameter, the reaction fading after fifteen to twenty minutes. Such reactions may be read only as "questionable," yet they can be obtained in the same degree on frequent reëxaminations and in the presence of clearly negative controls. Such minimal reactions are often overlooked in the use of the cutaneous method. In these cases, an intracutaneous test may be definitely positive, but even with this more delicate method of testing there will be found a number of slight questionable reactions. That these very doubtful reactions are at times significant is often proved by a clinical test, exposure to the substance in question producing symptoms and, conversely, relief of symptoms being obtained by avoidance of it.

Another type of reaction that may easily be overlooked is the delayed positive. These are apparently very rare, but the writer has met one undoubted example: A patient with angioneurotic edema on several occasions by both cutaneous and intracutaneous testing with onion protein gave a reaction that never appeared in less than two or three hours, and which would increase for as long as twenty-four hours when the material was injected into the skin. If he ate onions, he would invariably have a severe outbreak of urticaria to the point of frank purpuric lesions.

Is skin sensitization ever completely absent in the presence of hypersensitiveness elsewhere in the body? I believe that this does occur. Various observers have seen cases of typical seasonal hay fever or combined hay fever and asthma, yet with negative skin reactions by all methods of testing. Occasionally such a patient will give a weakly positive conjunctival or intranasal reaction to a pollen extract, pointing to a true pollinosis in these individuals. A further confirmation is offered by the therapeutic test. I have recently reported four cases of typical seasonal hay fever, one of the patients having seasonal asthma as well, yet with negative skin reactions. Three of these were given prophylactic treatment with the pollen most prevalent at the usual time of their symptoms (grasses, ragweed), with complete relief. The fourth untreated patient had his symptoms as usual. It is conceivable that a similar state may exist in other types of asthma, and may account for the disease in some patients whose history is typically that of hypersensitiveness but in whom all skin tests by every method of examination are negative.

Skin reactivity may be so excessive as to be very confusing. This occurs in those individuals with dermatographia, in whom the slightest trauma to the skin causes a marked angioneurotic local swelling. In these patients, the reading of tests by the intracutaneous method is particularly difficult, for the control as well as all the tests may give characteristic wheals with irregular "pseudopod" outlines and a wide zone of erythema. In some of these patients, the cutaneous method may prove less confusing, but not always. Then one must compare the degree of reaction of the test with that of the control. This comparison is made easier by doing fewer tests at a time, wider spaced, and placing the control and the tests at the same level of the forearm (the skin is more reactive as one approaches the elbow from the wrist). The traumatic lesions often fade more quickly than the true reactions, and may therefore be differentiated at times by delaying the reading of the reactions for an hour or more.

Skin reactivity is often present when there is no clinical manifestation due to the substances reacting positively. It is a common experience in

testing an asthmatic to obtain positive reactions to one or more foods, yet eating or abstaining from these foods may have no influence on the patient's symptoms. This is probably explained in this way: Skin tests with foods do not duplicate what happens clinically. In the test a native unsplit protein is artificially brought in direct contact with cells and serum, and if sensitization to that protein exists, a positive reaction will occur. But, practically, conditions are quite different: many of our foods are first much altered by cooking; they are then probably rendered harmless by the processes of digestion; and they come in contact with an unbroken mucous membrane. It is not uncommon to get a positive skin reaction to the hair of an animal with which the patient has never come in contact. Again, patients with no history of hay fever may give positive reactions to various pollens. A still more frequent finding is that an individual subject only to spring hay fever, or only to the autumnal variety, will react strongly to both grasses and ragweed.

What is the significance of these positive reactions with negative clinical findings? From the practical side, there are two important points to be emphasized. In the first place, it is a fundamental rule in the diagnosis of hypersensitiveness that finding a positive skin reaction of itself does not warrant the assumption that the substance so reacting is actually a cause of the patient's symptoms. There must always be clinical proof that exposure to the substance in question will produce symptoms, or that avoidance will bring clinical relief. The second point to be made is that these positive reactions may help us along prophylactic lines. For example, persons who have never had hay fever but who react to pollens not infrequently develop the disease in time, following what was apparently an overexposure to pollens (for instance, a long walk through fields on a dry, hot day). In others, we obtain the history that hay fever began immediately after a nasal operation performed during the pollen season. These latter patients were probably pollen-sensitive before the operation and would have given positive skin reactions had they been so tested. It seems reasonable to suppose that in moderately sensitive patients without symptoms a nasal operation in the pollen season breaks down the patient's partial immunity by way of the physical breach in his nasal mucosa, and the patient's relative protection, once lessened in this way, is not regained. In either case, overexposure to pollen or injured nasal mucosa, there has occurred a sudden abrupt shift in the balance between a moderately sensitive patient's resistance to pollen absorption and pollen exposure, either by a lowering of the former or an increase of the latter. If these observations are correct, then individuals with positive skin reactions must be considered as potential sufferers from allergic disease. We should warn them, therefore, against undue exposure to the substances to which they react and we should advise those who are pollen-sensitive against elective nasal operations during the pollen season.

Variability in skin reactivity is not merely an individual one. Age also seems to play a part, and younger patients react more strongly than do those of more advanced years. This may account in part for the greater number of diagnostic failures in the latter. Occasionally, we find that a patient may react to a given substance in a variable degree on different days. A weakly or a questionably reacting protein may on second testing give a definite positive. Therefore, slight or questionable reactions should always be repeated.

It is obvious that skin tests have very definite limitations. Far from giving us a true picture of the etiology in a given case, they might be said to show us a much distorted image in an imperfect mirror with many flaws and not a few blind spots. To interpret the reactions properly, we must have a full realization of their shortcomings lest we fall into frequent error. Yet with all their deficiencies, the fact remains that skin tests constitute our most valuable single aid in diagnosis of human hypersensitiveness.

ABSTRACT OF DISCUSSION

On Bronchial Asthma

R. H. SPANGLER, M.D. (Philadelphia, Pa.): Nonspecific therapy is of value in certain types of allergic asthma. As a rule, allergic patients are hypersensitive to more than one substance and react to multiple allergens. The allergic disposition or diathesis is a biologic alteration affecting the cell. Treatment aiming to remove the cause is often difficult and frequently of no avail. Hence, specific treatment is often not so permanently effective as nonspecific therapy which acts by altering the cellular reactive mechanism so that the allergens, or sensitizing agents, do not produce hypersensitivity by irritation of the smooth musculature.

Again, nonspecific therapy is especially helpful when the tissues are extremely hypersensitive. Recently I had a letter from a doctor in Texas regarding a physician patient of his who was so very sensitive to pollens that a 1:50,000 dilution caused violent asthmatic paroxysms. Venom protein injections were administered after milk and peptone had failed, with immediate and continuing relief. Probably the advantage of venom protein (crotalin) over other protein agents is largely due to the fact (as verified by Menton in the *Journal of Biological Chemistry*, Vol. 43, 1920) that venom does not increase the acidity of the blood, as do milk and peptone. This has been demonstrated experimentally in animals by Menton and, as I have previously reported, clinically in humans.

Walter J. Blackburn, M.D. (Philadelphia, Pa.): Does Dr. Kern consider the reaction to the Schick and Dick tests similar to the allergic reactions?

Dr. Clarke (in closing): We divide our cases of asthma into four groups: (1) those that have only the specific factors, (2) those that have only the infectious factors, (3) those that have both combined, and (4) those that have neither. It is in the fourth group that we use the so-called nonspecific therapy—that is, vaccine treatment. Our best results are from specific therapy. Even when the patients are inordinately exposed to the cause of their trouble (like those Philadelphians who are susceptible to ragweed) specific therapy gives the most satisfactory results. We know nothing about the action of nonspecific therapy, although we realize that there is a pronounced shock which has a decidedly favorable influence in certain cases.

Dr. Kern (in closing): Replying to Dr. Blackburn's question, I would say that the reactions in the Schick and Dick tests are apparently of a different nature from the reaction to the cutaneous tests obtained in hypersensitization, although it has been suggested by some that the Dick-test reaction is one of hypersensitiveness to the streptococcus. As Dr. Clarke has said, in hypersensitization there is a reaction between a foreign substance, the atopen, and a reagin, the latter being peculiar to the cells and serum of the sensitive individual and passively transferable—something quite different from the immune reactions to which the Doctor has referred.

HEMANGIOMA OF ORBIT*

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In considering tumors within the orbit, it may be well to picture the orbit as a rigid cone-shaped cavity made up of seven different cranial bones having nine foramina or channels opening into it, and containing besides the eyeball. the lachrymal gland, orbital fat, cellular tissue, muscles, arteries, veins, lymphatics, nerves, both motor and sensory as well as of special sense. Any one of these structures may give origin to a tumor. In addition, neoplasms may develop in the orbit from metastases from growths originating elsewhere in the body, or from invasion from cavities adjacent to the orbit. The growth may involve but a single tissue, but as these different orbital structures rest so closely together, it is not difficult to understand that compound tumors involving more than a single tissue may be met with and make differentiation between them a perplexing problem.

One general symptom of essentially all orbital tumors is exophthalmos. This may be slight in the early stages, but is progressive and naturally becomes more pronounced as the tumor grows. Palpation, transillumination, percussion, auscultation, focal lighting, skiagraphy, and fluoroscopy are all of much diagnostic value, and should be utilized whenever it is practical to do so. Before undertaking any serious operation for the removal of an orbital growth, Wassermann tests should be made, and the nose and accessory cavities should be carefully examined. Tuberculin tests are also advisable.

The appended case is that of a forty-four-year-old male who gave a history of a gradually growing prominence of the right eye which began when he was twenty-four years old. Two years prior to this he received a blow on the side of his head from a thrown baseball. However, he is uncertain on which side of the head he was struck, so this accident may be of no significance. He gave a somewhat indefinite account of several attacks of hemoptysis about six months before the eye symptoms began, in one of which the bleeding was profuse. The loss of blood was estimated to have been at least three pints. There have been no hemorrhages since, and the patient is inclined to think this bleeding may have been from the nose. No other significant facts were elicited. Some six months following the first sign of the proptosis there was some puffiness of the eyelids and a slight blurring of the vision in the eye. For the next five or six years there was little or no noticeable change in the eye, but subsequently a steadily increasing bulging forward of the eye and more and more impairment of the vision took place. For the past two years the eye had been decidedly more proptosed, and much of the time the upper lid had to be seized with the fingers and drawn down over the eyeball in order to close the eye and protect the cornea. The patient has worn glasses for many years, and frequent changes have been made in the lens for the right eye. The present correction and vision is as follows:

O.D. $S + 7.00 = C + 1.25$ ax $90° = 18/20$
O.S. $S + 1.00 = 20/20$

There is a large relative scotoma in the right eye. Diplopia has not been present.

The accompanying photographs show the exophthalmos and displacement of the eyeball better than it can be described.

A distinct mass could be felt in the upper and outer part of the orbit. It was firm and immovable. There was no pulsation. No bruit could be detected. A lipoma or one of the slow-growing sarcomatous growths were considered as possibilities as to the nature of the growth. Dr. William Campbell Posey saw the patient in May, 1924, and was inclined to the latter view. Luetic infection was denied, and Wassermann examination was negative.

*Read before the Section on Eye, Ear, Nose, and Throat Diseases of the Medical Society of the State of Pennsylvania, Philadelphia Session, October 13, 1926.



Fig. 1. Hemangioma of orbit, showing displacement of eyeball.

The radiographs, while showing a darkened, diffused area limited to the orbit, did not aid in determining the nature of the growth.

The ophthalmoscopic picture showed some pallor of the optic disc and a very slight venous congestion, but much less than might be expected from the pressure required to cause so much displacement of the eyeball. The increasing exophthalmos is shown by the following exophthalmometer readings:

	Right Eye	*Left Eye*
June 5, 1924	33	24
August 4, 1924	37	28
April 9, 1925	40	29

On the latter date, the vertical width of the palpebral slits was 24 mm. in the right eye and 11 mm. in the left eye. For these observations, as well as for valued assistance at the operation, I am indebted to Dr. Waid E. Carson.

Before operation the red blood cells amounted to 3,452,000, hemoglobin 90 per cent. On April 17, 1925, the patient being etherized, an elliptical incision was made, beginning on a line with the upper external angle of the orbit, curving slightly forward, and about 1¼ inches in length, exposing the external wall of the orbit. Then, by blunt dissection, a dark-colored mass was exposed to the outer side and above and behind the eyeball. This mass was freed by finger dissection. It was found to be encapsulated, most firmly attached far back to the orbital wall. There was no pedicle. The mass was ovoid in shape, and measured 3¼ cm. by 4 cm.

In the case reported by Quackenbos (*Ann. Ophth.*, October, 1908) the tumor mass removed was the size of a goose egg, but in its removal it was necessary to take out the eye. The pathologic diagnosis made by F. H. Verhoeff was hemangioma of the orbit with invasion of the sclera, cornea, choroid, ciliary nerves, and optic disc.

In the case of my patient, Dr. V. L. Andrews made sections of the growth and furnished the pathologic report as follows, together with photographs of the tumor showing both the cut and the capsule surface:

"Specimen is an encapsulated dark-red, slightly oval tumor 4 cm. by 3¼ cm. It is soft and cystic in nature. On section, a large amount of blood oozes. The cut surface presents an appearance similar to a congested spleen in which trabeculæ are fairly easily recognized.

"Microscopic section shows a nonplastic growth having a good fibrous capsule which is not broken, and radiating from this into the depths of the tissue are large fibrous bands which interlace, forming good-sized venous channels which are filled with blood and lined by endothelial cells. There is no evidence of malignancy. In some places the fibrous tissue shows slight proliferation.

"Diagnosis—hemangioma of orbit."

In regard to the operation, the tumor was freed and removed without great difficulty. It was not necessary to resort to the Krönlein operation, or even to remove a part of the bony rim of the orbit, as was done by Stieren in his operation for the removal of a neurofibroma of the orbit (*Am. J. Ophth.*, March, 1923, Vol. 6, No. 3).



Fig. 2. Hemangioma of orbit, view of profile.



Fig. 3. Patient fifteen months after operation.

In July, 1926, or fifteen months after the operation, the ophthalmoscope reveals no discernible change in the fundus. The scotoma remains. The vision equals 20/120 in the right eye. There is ocular comfort and no indication of any recurrence of the growth.

The second set of photographs (figures 3 and 4) made fifteen months (July, 1926) after the operation, show the contrast in the appearance of the man prior to the operation and at the present time.

ABSTRACT OF DISCUSSION

William Zentmayer, M.D. (Philadelphia, Pa.): There is nothing more difficult than the diagnosis of orbital growths. Appearances and palpation are often misleading. Frequently, on palpation we find a mass in the fore part of the orbit, either above or below the globe, that would appear to be a growth, only to find, upon operation or x-ray study, that the growth is much more deeply seated and that this mass is probably secondary to conditions arising from changes in the orbit itself—such as pressure on the orbital veins or a pushing forward of the orbital fat. In one such case we found a dumb-bell shaped osteosarcoma behind the eyeball so large that even after enucleating the eye, it could not be delivered through the external orbital opening, and it therefore had to be crushed before it could be removed.

The effect of orbital growths upon the optic nerve, of course, varies a great deal with their location, but this symptom is of some value in localizing the growth. Optic atrophy is a pretty sure indication that the growth is well back. We have not found that x-rays are a great deal of help in arriving at either the character or exact location of the growth.

Burton Chance, M.D. (Philadelphia, Pa.): The photograph indicates what a formidable task this case presented, and the result is most gratifying. In my own experience I have had three orbital hemangiomas. They were more diffuse than this one, and there was greater hemorrhage at operation than in Dr. Curry's case.

Edward Stieren, M.D. (Pittsburgh, Pa.): The Krönlein operation is comparatively simple in children, but difficult in adults. Harold Gifford said years ago that the main difficulty was to replace the flap. Edward Jackson called attention to the fact that in the majority of eyeballs the equator of the globe is about on a level with the external canthus, so it is really surprising how much space there is to work in without resorting to plastic resection.

In my case to which Dr. Curry referred, I believe the tumor could have been removed without taking off the rim of the orbit, although the mass felt so large that I was afraid of bruising the ocular structures. From a cosmetic standpoint, we get a better result in most cases by making a straight instead of a curved incision into the temple.

Very often, in such cases, we find the hyperopia present to be false, due to the tumor pushing forward on the eyeball, and after the pressure is relieved the hyperopia decreases—in my case from 18 to 13 diopters.

Conrad Berens, M.D. (New York, N. Y.): I have had an experience similar to that of Dr. Curry, and withstood a great deal of opposition in not doing a Krönlein operation, although I have since found that H. Knapp had advocated the less radical procedure in excising an angioma of the orbit in 1864.

My patient was a boy four years old. The vision was 20/30 in the right, and 20/20 in the left eye. The parents had noticed that the right eye had become more prominent during the past few months, although it had always been slightly so. While under observation, the swelling of the right optic nerve increased from 1 to 3 diopters, and the vision was reduced to



Fig. 4. Showing improvement in appearance fifteen months after operation.

20/50. The external rectus was resected, and a mass found in the lower outer angle of the orbit. A needle was inserted, and straw-colored fluid was withdrawn which later proved to be blood serum. By careful dissection, an encapsulated fluctuating growth was traced to its attachment to the lower temporal side of the nerve, where it was ligated and excised. After four

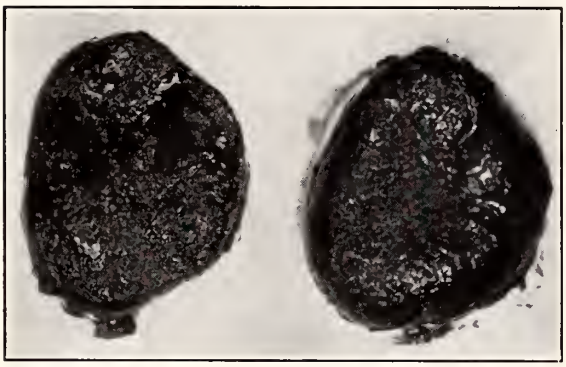


Fig. 5. Orbital tumor. (a) Cut surface. (b) Capsule surface.

or five months the vision returned to 20/30, and the eyeball was in good position. Pathologic study by Dr. G. S. Dixon revealed an encapsulated angioma.

Dr. Curry is to be congratulated on his results, and perhaps these two cases demonstrate the value of conservative exploratory measures until conditions are encountered which necessitate more radical surgery.

DR. CURRY (in closing): Owing to the size of the tumor and the proptosis that existed, I approached the operation with considerable apprehension, fearing that enucleation might be necessary or that there might be trouble in getting the growth out. However, the most striking feature of the operation itself was the comparative ease with which the tumor was removed.

THE EARLY DIAGNOSIS AND TREATMENT OF CANCER*

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Many of us were graduated in medicine when only the late signs and symptoms of cancer were taught in the medical colleges, and only the late signs were found recorded in the textbooks. In those days, the laity were also totally ignorant of the early signs of cancer. We have now come to realize that the real hope of curing cancer lies in its early recognition and thorough treatment in the earliest stages. Cancer is destroying approximately 100,000 lives annually in the United States; it is the cause of one in every ten deaths after the age of twenty. This one in ten applies to our individual communities. The ratio is a little higher in Philadelphia, probably because many patients come to our city for treatment in an advanced stage, too late to be cured.

In the State of Pennsylvania, according to Dr. Wilmer R. Batt, director of the Bureau of Vital Statistics, there were in the year 1906, 58.9 deaths from cancer per 100,000 population. In 1923, there were 90.8 deaths per 100,000, or an increase of 54 per cent in proportion to the population, within a period of 17 years. This increase shown may be due in part to more accurate records. The ratio is not likely increased by more accuracy in diagnosis, for any physician 17 years ago could recognize cancer in the stage which causes death.

We should become and are becoming more expert in the early diagnosis of cancer. No statistics are available to prove it, but I am sure that many more cancers are being cured today than were cured 20 years ago. Many more will be cured if treated thoroughly in the early stage.

"Early diagnosis and early radical treatment" must be our motto. The early recognition of cancer depends upon two factors: (1) The early appeal of the patient to the physician. (2) The thorough examination of each patient by the physician while the disease is in a stage which barely suggests cancer.

These factors demand that each of you do your part in your own community and in your own field of practice to teach the families the early signs of cancer, or the danger signals. If the patient who is suffering from the disease is sufficiently questioned, one can nearly always learn of some abnormal symptoms preceding its recognition. More detailed record of such symptoms will teach us and the laity the early signs of cancer. Thorough periodic health examinations will help in the early recognition of malignancy, and when this is not present and not even suggested, some other condition may be recognized and properly treated, or at best, faulty habits may be corrected and health restored.

The value of public education upon the subject of cancer has been shown by the report of the Cancer Commission of the State Medical Society, under the chairmanship of Dr. Wainwright (ATLANTIC MEDICAL JOURNAL, Sept., 1924). In 13 years, from 1910 to 1923, this education has cut down the average time between the discovery of the first symptom of superficial cancer by the patient and the first call on the doctor from 18 months to 14½ months, or 20 per cent. In cases of deepseated cancer, this interval has been reduced nearly 50 per cent. During the same 13 years, the physician has learned to act more promptly. In superficial cancer, the time between the first visit of the patient and radical treatment was reduced from 13 months to 4½ months, or 65 per cent, and in deep-seated cancer from 12 months to 3.9 months, or approximately

*Presented by invitation before the Lehigh Valley Medical Association, June 29, 1926.
†Chairman of the Committee on Cancer Control of the Philadelphia County Medical Society.

70 per cent. With the knowledge available today, these averages should be greatly reduced on all sides.

Some of the important factors in the early diagnosis of cancer are as follows:

Take a careful history of all patients and review the records you already have. In dealing with visceral disease, the history often furnishes the most important evidence. Generally, the duration of the disease and the symptoms, if cancer, will be considerably longer than the chief symptoms of which the patient complains and which bring him to the physician's office. The early signs and symptoms of cancer are almost never characteristic, and a diagnosis can be made only after the most thorough study.

Examine all patients thoroughly. The blanks which have been prepared for periodic health examinations will serve as guide posts, but like a detective hunting a criminal, we must frequently follow a trail which is not indicated by guideposts. Like criminal detective work we may waste energy in following a false trail, but until our knowledge is increased that is unavoidable. No patient can be thoroughly examined without removing the clothes, and yet we see advanced cancer in patients who had never been asked to *remove their clothing* for a thorough examination.

Find the cause of loss of weight. This is often a late, but rarely an early sign of cancer. Due consideration of loss of weight may, however, help to make a diagnosis that would be otherwise overlooked. This applies especially in cancer of the stomach.

Be suspicious of any sore on the skin or mucous membrane that does not heal within two weeks. Be especially suspicious of any sore on the lip. Be doubly suspicious if the sore has an indurated edge, or has come on spontaneously, or as the result of traumatism, or continued irritation. Do not make repeated applications of nitrate of silver, for you are only adding superficial irritation which causes local congestion and hastens the growth if the lesion is cancer.

Be suspicious of any induration anywhere in the body, if not definitely accounted for by acute infection. Even a positive Wassermann test does not eliminate the possibility of cancer, for cancer develops frequently on the basis of a luetic infection.

Be suspicious of any mole or wart that is changing its character or size. If a mole is brown or black, and especially if it has existed for years, it should be thoroughly removed without delay, by means of electrocoagulation. Incomplete removal by this or any other method is dangerous. If there are associated palpable lymph nodes, they are very likely metastatic carcinoma.

Always examine with the fingers as well as with the eye. This applies also, and especially, to the mouth, throat, vagina, and rectum. Many cases of early cancer of the mouth, throat, vagina, and rectum, are overlooked because the physician has not made a digital examination at the first visit. Often there is prolonged delay, and requests for many special examinations, when careful palpation with a trained and sensitive finger will make the diagnosis. The thorough and skillful application of radium and x-rays to early cancer of the mouth, throat, vagina, and rectum will likely give the best results. Radium and the x-ray are physical agents which obey definite laws. They are neither mysterious nor magical, but must be used in correct quantity and with sufficient skill. At least as much skill and good judgment must be used with these agents as is used with surgical instruments. Any one who attempts to do surgery has had at least two years of training in his medical course and hospital service, while we often find physicians attempting radiology with no training and no special study.

A new growth anywhere in the body should be regarded with suspicion until proved benign. Even a benign growth is potentially malignant, and is never a normal condition. Therefore, when practical, it should be removed surgically for microscopic study, and if found to be malignant, the area and the neighboring lymphatics should be thoroughly treated by radiation. The value of postoperation radiation has been definitely proved by a statistical study in breast cases made by Widmann and myself, in which we found the five-year cures doubled as compared with operation alone, when the axillary glands were involved.

Be suspicious of enlarged glands anywhere in the body, and find the cause of such enlargement. It always means some serious condition. They commonly indicate some form of malignant disease, where tuberculosis or syphilis and the acute infections have been eliminated. The removal of a gland for microscopic study is less dangerous than delay in diagnosis.

Absence of pain in a tumor or a sore does not mean absence of cancer. Almost all cancers are painless at the beginning. Metastasis commonly takes place, and the case may be hopeless before any pain develops. This fact must be especially emphasized among the laity, for patients commonly delay because of absence of pain. Cancer and tuberculosis may exist in the same patient.

Cancer frequently develops in syphilitic patients. A positive Wassermann test, therefore, does not prove that a lesion is not cancer. Antiluetic treatment should not delay the treatment for cancer more than two weeks. When in doubt, one should seek additional advice, or remove a section for microscopic study. When cancer and lues are found in the same patient, both must receive proper treatment.

A discharge from the nipple or a lump in the breast does not always indicate cancer, but must be seriously investigated. If malignant, prompt removal of the breast is advisable, to be followed promptly by radiation. If due to mastitis, treatment by radiation usually gives relief. When in doubt, the condition should be treated as if cancerous, for nearly all these tumors are potentially malignant.

The cause of any vaginal discharge should be determined, and not explained away without a thorough local examination. It may indicate a cervicitis which may be the forerunner of cervical cancer, and can be cured. The cervix should be inspected as well as palpated. Victor Bonney says that cancer of the cervix is practically always preceded by chronic cervicitis or by old cervical lacerations. By curing the cervicitis and the lacerations you can prevent cancer. We must teach women, therefore, to have the physician determine the cause of any vaginal discharge.

Irregular bleeding from the vagina, no matter how slight, should lead to a careful study. If neither clearly innocent nor probably malignant, the patient should be kept under close observation. A consultation will be helpful. Doubtful cases are often better treated as if malignant. A curettement may be necessary for diagnosis, and when doubt exists, this should be done and, if practical, radium applied at the same time. The thorough and skillful application of radium in these early cases may be expected to bring about a cure. In cases in which the disease is confined to the cervix, thorough and skilful radiotherapy has given as high as 80 per cent of five-year cures. In the late stages, it may be more than 1 per cent.

Bleeding from the uterus or vagina occurring after the menopause has been established is very likely to be due to cancer. When in doubt, a specimen should be removed and radium applied at the same time.

Bloody urine is suggestive of cancer in the urinary tract, especially in the bladder, and its cause must be determined. An x-ray study for stone, a pneumocystogram, and a cystoscopic examination are usually necessary. Continuous hematuria usually indicates malignancy. If found to be due to malignant disease of the bladder, resection should be done if possible, and if not, radiation should be used at once.

Blood-stained stools or bloody mucus, painful, frequent, or difficult defecations should lead to an investigation of the rectum and bowel, under an anesthetic if necessary, and by speculum as well as finger. An x-ray examination of the bowel should be made. The bleeding should not be erroneously ascribed to hemorrhoids, as is frequently done without even a superficial examination. Hemorrhoids can be seen and palpated. If carcinoma is found, resection should be done at once, when practical, to be followed by radiation treatment.

Investigate the cause of any prolonged loss of appetite or unexplained indigestion, especially with loss of weight, and particularly after the age of forty. This always requires a careful x-ray examination. In skillful hands, a carcinoma of the stomach or bowel should be demonstrable by the x-rays as early as it will give rise to symptoms. Cancer of the stomach was the cause of death in 17.3 per cent of 709,415 cancer deaths in England and Wales between the years of 1901 and 1920. Never wait for vomiting of blood, loss of weight, cachexia, obstruction, etc.; these are usually late signs. The earliest symptoms of gastric cancer are gastric discomfort, loss of appetite, and a slight anemia. Herbert J. Patterson says: "A feeling of discomfort and uneasiness after food, insidious, and scarcely perceptible at first, usually is the earliest symptom which attracts attention." When practical, the carcinoma should be promptly excised. A considerable number of cures may be expected if operated upon early.

Vomiting of blood is always a danger signal. Its cause must be determined. An ulcer of the stomach frequently precedes cancer, and can be diagnosed by the x-rays. It is claimed that 40 to 60 per cent of the cancer cases give a history of ulcer, and Leitch says that "approximately 10 per cent of all cases of gastric ulcer submitted to operation can be shown to be malignant." McCarthy of the Mayo Clinic finds that when a gastric ulcer is the size of a quarter-dollar it is likely malignant.

Ensterman (*Radiology*, May, 1926, p. 409), from a study of 1,408 patients with carcinoma of the stomach from 1918 to 1920 inclusive, found that in 40 per cent of the cases of malignant ulcer, the clinical and roentgenological findings were indistinguishable from those associated with chronic benign gastric ulcer. He states further: "In 47 per cent of the proved cases of gastric carcinoma in the Mayo Clinic, the history was that of the accepted syndrome of benign ulcer."

When a benign ulcer has become malignant, the alert clinician can frequently elicit a slight suspicious change in the nature of the symptoms, such as: (1) Loss of periodicity of attacks, the attacks being longer, and the intervals of relief shorter. (2) Loss of periodicity of pain, the pain tending to persist after eating. (3) Less severe pain, but a more constant dull ache, increased by eating. (4) Loss of appetite, which may ensue even when the test meal shows the high acidity characteristic of ulcer. (5) Variation in the vomiting, which may diminish in amount and frequency but is rarely increased unless there is obstruction; and when this symptom is present vomiting will no longer produce complete relief from pain. (6) Diminution in gastric acidity compared with that of a recent test meal. (7) Persistent occult blood in the feces when the diet is controlled in cases in which the neoplasm has progressed beyond the microscopic stage.

Seventy-four per cent of all patients with gastric carcinoma are males. Eight per cent of carcinomatous ulcers occur in patients less than 40 years of age.

Palpate the abdomen thoroughly in every obscure case. A thorough x-ray study of the gastro-intestinal cases is very helpful. Such examinations may point the way to health, whether cancer is present or not, but especially when cancer is not present.

Persistent jaundice must be investigated. The size and outline of the right lobe of the liver can be easily determined now, and much valuable information regarding the neighboring organs, including the gall bladder, can be obtained by means of an x-ray examination.

The cause of difficulty in swallowing must always be investigated. This is best done by means of an x-ray examination, or esophagoscopy, or both. The treatment of carcinoma of the esophagus has been discouraging, but we may hope for better results from earlier diagnosis. The investigation should start when the patient first notices something unusual in swallowing.

The expectoration of blood without fever may mean cancer of the lung. The presence of fever does not eliminate cancer. Fever is commonly present in advanced cancer. Pain in the upper part of the chest, neck, or shoulder may be due to cancer. An x-ray study will give the most reliable information. A few cases of cancer of the lung have yielded to treatment.

Be suspicious of cancer of the larynx when hoarseness develops and is not definitely due to cold, or if it is continued more than two weeks. Its cause must be determined. A laryngoscopic examination, and an x-ray examination of the chest will be helpful. Some good results have been obtained by radiation treatment, and some by laryngectomy. Sir St. Clair Thompson finds that the intrinsic cancers, which usually originate on the anterior half of the vocal cord, if operated upon early show a cure in 80 per cent of the cases, while the extrinsic group which start along the superior border, the posterior surface, or walls of the larynx, are usually far advanced when diagnosed, are generally inoperable, and are best treated by radiation.

CONCLUSIONS

1. The cure of cancer depends upon the earnest effort of, and coöperation between the patient, the family physician, and the specialist.

2. More depends upon the early recognition of the disease than upon anything else.

3. Whatever is the method of treatment, the eradication must be complete at once. Piecemeal treatment of whatever form is bad.

4. Consultations with those who have had a large experience will not only help the individual patient, but will be useful for future patients.

5. The majority of cancers can be cured, if treated thoroughly and skillfully in the early stages.

THE ATLANTIC MEDICAL JOURNAL

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Editorials

HAVE YOU REGISTERED?

The blanks for registration of physicians under the annual registration law were held up by the printer so that the Board of Medical Education and Licensure was unable to have them in the hands of all physicians before January 1st. These have all been distributed by now, however, and should be filled out and returned promptly, together with the fee of one dollar.

It is worth a great deal to the profession to have an annual check on fraudulent and unlicensed practitioners, and we have no doubt that the list of registered physicians, practitioners of drugless therapy, and chiropodists issued by the Board will prove a popular feature of the work. The fact that a physician's name is omitted from this list will not be proof positive that he is an illegal practitioner, since additions will doubtless be made after the date of publication, but the presence of his name will indicate that he is entitled to practice in the State of Pennsylvania.

The inspectors of the Board have done splendid work the past year on a very limited income in following up complaints and tracing cases of fraud. While there has been criticism of the Board for failing to clean up the State at once, the difficulties of putting into effect a proposition of such magnitude as the annual registration law must be considered. One year is much too short a time to judge of the efficacy of any law, and we must exercise the virtue of patience, realizing that the registration fee of one dollar does not provide a large sum for the policing of a state the size of ours.

Then, too, there is the unfailing element of public opinion to consider. Many people are in sympathy with the cults or with individual practitioners, and because of the politics involved, it is difficult at times to induce district attorneys to prosecute or juries to convict.

Members of the Elk County Society, in discussing this question recently, came to the conclusion that public opinion is the proper point of first attack, and suggested launching a drive to apprise the people of the real status of these illegal practitioners, no matter what the cost may be. They realized that "we cannot do much campaigning on a dollar a year," and that we must "either do it right or let the public learn by experience."

In the meantime, let us do our bit by registering promptly, and coöperating with the Board in its attempt to control a situation that is admittedly bad.

DR. THEODORE B. APPEL, SECRETARY OF HEALTH

We congratulate Governor Fisher upon his appointment of Dr. Theodore B. Appel "from down Lancaster way," as Secretary of Health. Dr. Appel is a hail fellow, a good mixer, sane and sound in administration, and reliable in the establishment of policies. As the head of the State Department of Health, the Commonwealth will be assured of the results of his endeavors to the end that the best interests of the citizens and the State will be subserved.

Dr. Appel is an ex-president of our State Society, and at the time of his appointment to the Health Department, was a Trustee and Councilor for the Fourth District.

Dr. Appel has been an indefatigable worker in all medical activities, and deeply regretted that it was necessary to tender his resignation from the Board of Trustees. He was an efficient counselor.

At the stated meeting of the Board of Trustees held at Harrisburg, Tuesday, February 1st, Dr.

Frank G. Hartman of Lancaster, was elected Trustee and Councilor for the Fifth District to fill the vacancy caused by the resignation of Dr. Appel. Dr. Hartman also is an ex-president of our State Society, and a former Trustee and Councilor, and we extend him a hearty welcome to the renewal of duties with which he is so intimately acquainted.

AND NOW A RHEUMATIC SERUM

In the January issue of the *American Journal of the Medical Sciences* appears (in the form of a preliminary paper by James Craig Small, M.D.) the announcement that, working in the laboratories of the Philadelphia General Hospital, he has isolated what appears to be the specific organism of rheumatic fever. For this organism the name Streptococcus cardioarthritidis has been suggested.

During the past quarter of a century many careful and skilled workers have been searching for the cause of this disease. In 1900, Poynton and Payne announced that they had isolated from the blood streams and periarticular tissues of acute-arthritis patients, an organism which they called the Diplococcus rheumaticus, and which was believed to be specific for this condition.

Other workers, after careful efforts to confirm the work of these investigators, concluded that not one but several strains of streptococci were capable of producing acute rheumatism. Rosenow, in 1910, contended that the infecting streptococci became so transformed, morphologically, as a result of varied bodily cultural conditions to which they were subjected, that the organisms isolated from joint structures are the descendants, if, indeed, not the altered streptococci themselves, so easily isolated from throat cultures. Barker and Billings, among others, subscribed to this belief.

The fact remains that no investigator up to the present has been able conclusively to demonstrate the existence of an organism which is constantly present in tissues and body fluids of patients suffering from rheumatic fever, and which can be consistently recognized by methods of agglutination. Nor has there been, in the recent past, any difficulty experienced by investigators in producing marked alteration in the joints of animals by injecting intravenously a number of streptococcic strains. But since no *single* organism could be proven to represent the *one* cause (if there be but one) of rheumatic fever, of course, no attempt at the development of a specific serum has resulted.

These facts are here set down, not in any way to minimize the work of Small, but to sketch briefly the experimental background of which his work, we hope, is the triumphant culmination.

The specificity of the Streptococcus cardioarthritidis is strongly indicated by its constancy in cases of rheumatic fever; its response to agglutination tests, and, most important of all, its production, when injected into an animal, of a serum to which the disease promptly yields. Moreover, the possibility that the results observed has been simply the response to a nonspecific protein is lessened, because the serum has been injected intramuscularly, and not intravenously.

However, if this serum exhibited specific properties only for the arthritic manifestations of rheumatic fever, it would be a therapeutic addition of the highest importance. But when one considers that from sixty to ninety per cent of all cases of carditis are preceded by tonsillitis, chorea, or rheumatism, and that in Small's clinical series—striking, though necessarily few in number of cases—the serum used appeared to have a specific curative effect on the last two conditions named, the real significance of this announcement becomes more apparent.

No predictions can be made at this time, either as to the extent or the ultimate possibilities of this work. It will be submitted to the searching scrutiny of bacteriologists everywhere, and the clinical test must, and should be equally as exacting. The chief aim now of Dr. Small and his coworkers should be to facilitate the production and distribution of this agent in sufficient amounts, so that, if proven effective, its benefits may not long be withheld from the medical profession which so urgently needs its curative properties.

STATE-OWNED INSTITUTIONS

Physicians throughout Pennsylvania were no doubt pleased to read that portion of the inaugural address of His Excellency, the Governor, John S. Fisher, dealing with State-owned institutions. They may take hope that the chief executive of the Commonwealth has recognized their pleas that new institutions be provided for patients with mental diseases, delinquencies, and defects in order to meet the needs of an increasing population, and that the old institutions be rehabilitated to meet recognized safety requirements and hospital functions, and to provide adequate facilities for the care of officers and employees. Governor Fisher's frank statement and businesslike approach to these problems, as expressed, merits the confidence and support of the medical profession. His words, as appearing

in the public press and heard by attentive listeners were:

"All classes of State-owned institutions are pleading for repairs, additions, and equipment. In many cases the need is immediate and insistent. We must not neglect the thousands of our citizens who are unfortunate and suffering. I recommend such measures for present relief as the public means will afford. However, I want to emphasize the fact that nothing is more important than a realization by our people that the time is approaching when their hospitals and charities with which the State has dealt so generously should receive a greater measure of home support.

"I propose, with as much expedition as possible, to make a survey of the normal schools, state hospitals, penal and correctional institutions, homes, and asylums to determine their condition and needs and to formulate a plan for their rehabilitation. This will require large outlays, but the work can be done during a period of years and the cost so distributed as not to be unduly burdensome."

THE TRISTATE MEDICAL CONFERENCE

In this number of the Journal appears an abstract of the meeting of the Tristate Medical Conference, held at Atlantic City, December 4, 1926.

There were two topics before the Conference for discussion; namely, "The Qualification of Nurses and the Regulation of Their Relationship to the Medical Profession" and "The Prevalence of Rabies and the Need for Laws Requiring Vaccination of Dogs."

We desire to call the attention of our members particularly to the Conference report in regard to the nursing problem. We are eager to have any suggestions in regard to this situation, more especially that the same may be placed before Dr. Nathan D. Van Etten, of New York City, who, in addition to being chairman of the Committee on Nursing of the New York State Medical Society, is chairman of a special committee appointed by the Trustees of the American Medical Association to study the nursing question in the United States. This latter committee will welcome any help, aid, and assistance that may be accorded it, and the editor of the Atlantic Medical Journal will greatly appreciate it if those interested (and every physician *is* interested) will forward to him any comments or criticisms they may have in regard to the matter. We shall be very glad to receive any correspondence on the subject from the nursing profession. The questions involved are of such vital interest to the patient, physician, and nurse, the physician naturally being the keystone of the arch, that we want to do everything possible to afford a most complete survey of the situation, in order that proper deductions may be drawn and recommendations made. This will be done most efficiently if we lend our aid to the special committee appointed by the American Medical Association.

STATE OLD-AGE PENSIONS

The subject of old-age pensions is one on which much may be said for both sides. All thinking men and women, including physicians, should be acquainted with the various viewpoints concerning it in order that they may vote intelligently when the time comes for a decision on the constitutional amendment now pending. We have, therefore, made an earnest effort to investigate and analyze the many conflicting opinions for the benefit of our readers, and present herewith our findings. They cannot in any sense be said to be conclusive, but they may at least prove suggestive.

Old-age pensions have a long history, dating back many years in various European countries. In Pennsylvania the first bill authorizing the appointment of an old-age pension commission was introduced into the Legislature in 1917 by Ex-Governor Sproul, when he was still a member of the State Senate, and the first commission was appointed by Ex-Governor Brumbaugh. A bill authorizing State old-age pensions was introduced into the 1921 Legislature by Senator Max G. Leslie which made little progress, but when reintroduced with slight modifications in 1923 by Senator Wm. S. Vare, it was enacted. This law was shortly declared unconstitutional by the State Supreme Court, so that a constitutional amendment was then introduced into the 1925 Legislature to legalize the enactment of an old-age pension law. This amendment is up for second passage in 1927, and if passed will be presented to the voters of the State at the election of 1928. If successful, it is planned to present another old-age pension bill to a subsequent Legislature. There will also be a bill introduced this year to continue the present Old Age Pension Commission.

The members of this Commission at the present time are: James H. Maurer, Reading (president of the Pennsylvania Federation of Labor), chairman; David S. Ludlum, Devon; Mrs. Mary V. Grice, Philadelphia; James F. O'Toole, Pittsburgh; and Abraham Epstein, research director.

Some of the arguments presented regarding the bill are as follows:

Our present poor laws are based on principles inaugurated in England in 1601 by Queen Elizabeth. There are in Pennsylvania 583 separate poor districts operating under eight different systems of administration. Commission after commission has condemned the present system, and investigation by the Department of Welfare revealed appalling conditions in the county almshouses. It has long been recognized as a part of the public duty to care for the disabled and indigent, but the present system is utterly inadequate to supply the existing need.

The average wage in the United States today is under $30 a week, as shown by the *Monthly Labor Review* published by the Bureau of Labor Statistics of the U. S. Department of Labor. It is well-nigh impossible to raise a family on this income and make any substantial savings, especially under the temptations of the system of high-power salesmanship now in vogue. It is not consistent to urge a man to save, on the one hand, and on the other, urge him to buy in order to promote the general prosperity. Our present prosperity is of only a few years' standing, and the older men have not had the advantage of the greater opportunities it presents for saving.

China, India, and the United States are the only countries without some definite state provision for the aged, and some of our states have adopted such laws.

In Montana the average pension granted is $13.14; the maximum, $25. In all cases investigated, the average is considerably under the maximum, and $30 monthly is suggested as the maximum for Pennsylvania.

The many industrial systems of pensioning do not cover the ground, as only 5 to 6 per cent of all the needy aged are being provided for by this means. There are many varieties of industrial pension plans, but the unfortunate feature of the majority of these is that inadequate provision is made to take care of pensions when they fall due. As it is estimated that many of the firms which have adopted some pension system have not been in existence over thirty years, the peak of costs has not yet been reached, and it is questionable whether many of the systems now in force will not break down under stress.

The tendency is more and more to provide special care for the various groups who formerly had no refuge but the poorhouse. Dependent children are admitted only as a temporary expedient until they can be placed in private homes or in the charge of some of the child-caring agencies. State assistance is now granted mothers in order to make it possible to keep families together so that children may grow up under the best instead of the worst environment. State hospitals are provided for the insane and often for the feeble-minded. The only group for which special provision has not been made, at least in part, is that composed of the aged indigent.

There are two groups of the aged that need separate and distinct treatment. One group is composed of the ill (mainly chronic cases) that need hospital care. These can be properly handled only in the exceptional almhouse. For them it has been suggested that the county almshouses be transformed into county hospitals; or that the State provide half a dozen centrally located hospitals to which the counties will contribute in proportion to the number of inmates charged to them, as is done in the case of State hospitals for the mentally afflicted. The second group is composed of individuals who are able to care for themselves or whose relatives are able to support them partially. They might better be granted a small allowance, and permitted to live as they prefer. By this method husbands and wives need not be separated, and the pensioners will be made happier than if under institutional restrictions.

The present cash expenses of the almshouses in Pennsylvania are $6,200,000; administration expenses for counties, $3,000,000; and inmates taken care of, 8,320. The Commission estimates that the cost of old-age assistance would be: total expenses, $5,000,000; administration expenses for both State and counties, $300,000; and the number of persons taken care of 24,230. Thus nearly three times the number of aged would be cared for at $1,200,000 less cost.

It is generally admitted that it is a function of the state to protect the weaker members of society. This is necessary as a measure of self-protection, in addition to its appeal to man's humanitarian instincts. The passing of the age of individualism is to be regretted in many respects, for it was the individualists who laid the foundation on which our country rests. It takes a race of heroic fiber to survive in an age of individualism, and there can be no doubt of the weakening effect of state assistance. Yet, industry is now coöperative, capital is coöperative, labor is coöperative, and protection must be coöperative. To dismiss such legislation as paternalistic is begging the question. Our public schools are a monument to paternalism; our hospital system is paternalistic, as is mothers' assistance; so also is the public-health work done by the State and Nation. Many of the benevolent institutions of which we are most proud are paternalistic—if this is the correct term to use.

When analyzed, it appears to be a misnomer. Civilization is so highly organized that it has been found convenient to discontinue very largely the individual distribution of charity. Charitable associations and foundations have generally been formed, and it is a rare community which does not now conduct its yearly drive for charity. In some instances it has merely been found more expedient to permit the Government to collect the contributions by means of taxation, and to administer the various agencies which by means of the contribution of the whole population thus becomes more coöperative and participating than paternalistic.

It has been advanced as an argument against old-age pensions that industry would have to pay the costs. However, it is a well-known fact that taxation, while paid directly by manufacturers and merchants is always passed on to the ultimate consumer, so that whether consciously or unconsciously he always pays the bill.

It has also been declared that it would tend to discourage individual industry and saving, and that it would be difficult to prevent those who had relatives capable of caring for them from receiving aid. This is also true in the case of private charity. It could be prevented only by careful administration of the fund, but we do not believe it would be a sufficiently important factor to overbalance the many arguments in favor of the plan.

Opponents of the plan have declared that the cost would be anywhere from $25,000,000 to $60,000,000. The Commission claims that this is a gross overstatement, and that no figures have been produced to prove this contention.

Opponents have also objected on the ground that illness, physical or mental, is an act of God, so that hospitals and sanatoria cannot be classed with the old-age pension as paternalistic legislation. The physician, however, would be amused at the claim that illness and insanity are never the fault of the individual, while of course he is always to blame for growing old! One of the pitiful things that has been stressed by investigators is that dependence in old age is so often produced by illness or other causes utterly beyond the control of the dependent, and that many worthy people are among those in need of aid.

It would appear that the proponents of the plan have the best of the argument, although undoubtedly it can be made a malignant parasite by improper administration. We should suggest that if it is finally put in effect, the Welfare Department would be the proper agency for its administration, rather than an independent commission as provided under the law declared unconstitutional.

The subject is worthy of the serious consideration of all public-minded citizens, and should be thought of perhaps as old-age assistance rather than as another of the many pension systems now in effect. If the plan is adopted, however, it should be adequately supported, and should not be forced to struggle along for years on an insufficient allowance. A proper system of financing should be embodied in the law when it is finally presented to the Legislature.

SUPPORT FOR PURE SCIENCE

Secretary Hoover is to be commended for his efforts to secure further support for pure scientific research. Pure science has laid the foundation on which applied science has built civilization. It has made possible the present industrial expansion. Yet it is safe to say, while responsible for immense increase of wealth, that pure science has profited its disciples very little financially.

Constructive genius is comparatively rare, and should be supported and protected and given an opportunity to develop under the best conditions. Industry itself is the loser by the short-sighted policy which discourages the capable from entering research work because usually it means privation and self-denial and little reward.

This applies equally to scientific research along medical lines. It is of immense benefit to the entire population, for the increase in life expectancy and the decrease in morbidity shown by statistics are directly traceable to the application of principles demonstrated largely in the laboratory. We do not give our research workers adequate support. Their families must be fed and clothed and educated, so many of them are forced to divide their time between earning a living and investigation. Their duties are exacting, their responsibility enormous, their risks frequently great. Many such students of medical phenomena have lost their health and even their lives in the service. It is not fitting that they should be deprived of material appreciation and assistance.

Let us therefore make Secretary Hoover's recommendations our own, and lend our support to the building up of substantial means for conducting further researches in pure medical science.

A VOICE WITH A SMILE

The public press has recently reported that a woman in New York City was awarded a prize as the most meritorious among 1,600 telephone operators in that city. The winner was required to excel in method of answering, articulation,

voice quality, promptness, tact and courtesy, knowledge of the firm's business, and general intelligence.

This brings to mind very forcibly some of the experiences reported regarding telephone communication with the offices of physicians. The discourteous manner only too frequently noted, especially when some member of the physician's family is answering the 'phone, is surprising. As a rule, the physician himself is considerate in replying to telephone calls, although now and then one is found who will disguise his voice until he learns who is making the call. If it proves to be a friend, the change to dulcet tones is striking. When a woman member of the household answers the 'phone, too frequently the reply will be curt, the voice conveying the impression of annoyance at the interruption. It is of interest to note how often the reply is short—"No, the doctor is not in"—no attempt being made to render any assistance in locating him, and it is very easy to sense the party's desire to hang up the receiver.

Patients soon learn to know where discourtesies may be expected, and are not unapt to avoid telephone calls to such offices. A physician, when calling another physician's office, is wise always to give his own name first—which will assure better courtesy than anything else; at least this has been our experience.

Nowhere is the voice with a smile demanded more than in answering the physician's telephone. Nowadays practically all of the doctor's activities are transacted over the wire—rarely at the front door. It would behoove our members to give some attention to this suggestion, for many would be surprised to know the real truth in this regard about their own homes.

JOTS AND TITTLES

Scientific Research

A DISCOVERY that has been characterized as "the most important advance in medicine since insulin" has been described in the January issue of the *American Journal of the Medical Sciences* by Dr. James C. Small, of the bacteriological laboratory of the Philadelphia General Hospital. Dr. Small presents evidence that he has isolated the organism responsible for acute rheumatic fever and its associated manifestations (heart disease, chorea, and arthritis). This organism he has named Streptococcus cardioarthritidis (Spec. nov.). It has been isolated from blood and throat cultures from patients suffering with acute rheumatic fever, and also from excretions of a few chronic-arthritis patients. The bacterium was found to be capable of producing characteristic symptoms in rabbits. Administration of serum from rabbits and later from an immunized horse has been followed by prompt termination of the toxemia and marked improvement of symptoms.

ANOTHER IMPORTANT DISCOVERY has recently been made by B. A. Linden of the Bureau of Chemistry, United States Department of Agriculture, which may aid in explaining many poisoning cases that cannot be attributed to organisms of the common food-poisoning group—the paratyphoid-enteritidis group—hitherto the only ones recognized as causing intestinal disturbances. The new organism, although not identified as any well-defined species, belongs to the streptococci, and in appearance has much in common with the ordinary lactic types used in the preparation of "starters" for butter and cheese making. It was first found in a sample of imported cheese held responsible for an outbreak at Biddeford, Me., in 1925, and milk cultures of the organism fed to cats produced violent intestinal disturbances within a few hours. The same organism has since been isolated in two other outbreaks, in both of which cheese was the offending article. Although the organism will grow and multiply on meat and other media, so far, sickness has been produced in experimental tests only when milk was used as a culture medium.

PROFESSOR FENYVESSY, of Budapest, Hungary, has reported the finding of an influenza serum which he has tested in one hundred cases, all resulting in recovery, he claims.

DR. D. H. BERGEY, of the Department of Hygiene, University of Pennsylvania, has reported to the Society of American Bacteriologists experiments which point to the belief that diabetes mellitus is caused by a filtrable virus. Excretions from patients were washed through Berkfield filters and injected into rabbits. In about three weeks glucose appeared in the urine.

EXPERIMENTS with a compound of gold conducted by the Anti-Tuberculosis Society of the Philippines are said to have resulted in cure of a number of tuberculosis cases.

THAT CANCER OCCURS in vegetarians is proved by inquiries conducted among monastic communists in England by doctors connected with the health ministry, according to Sir George Newman, who holds that there is no foundation for the contention that the disease is caused by meat eating.

DR. SIMON FLEXNER, Director of the Rockefeller Institute is credited with the statement that research conducted by the Institute has proved that the virus which causes lethargic encephalitis has not been isolated, as formerly reported, and is not identical with the virus of herpes.

THE STATEMENT is attributed to Prof. Arthur H. Steinhaus, head of the department of biological science of the Y. M. C. A. College, Chicago, that exercising to reduce weight will only add to the fat. He claims that dogs, put on exercise and a reduced diet, gained weight, while a control with no exercise and on the same diet maintained a constant weight. We fear this needs further confirmation, although it has been our own experience that the harder we work the fatter we grow!

FEEDING EXPERIMENTS conducted with albino rats by the Bureau of Animal Industry, U. S. Department of Agriculture, showed that the protein of beef enhances to a remarkable degree the nutritive value of protein in wheat, bolted wheat flour, corn meal, oatmeal, and rice. When each of these was the sole source of protein in the diet, beef was more efficient for promoting growth than an equivalent amount of protein in the form of wheat, oatmeal, or navy beans. But when combinations of equal parts of beef and vegetable protein—or even one part of beef and two parts of vegetable protein—were fed, the mixtures were practically as efficient

for promoting growth as when beef protein alone was used, except in the case of navy beans and potatoes. Briefly, the experiments show the high nutritive value of food combinations, including meat proteins.

Dr. S. I. Bechtel, of the agricultural experiment station at Pennsylvania State College, has found that when a cow is fed a ration deficient in vitamin B, it will still give milk containing this vitamin. In an effort to determine the mechanism by which the cow manufactures this vitamin, an opening has been made in the stomach of one of the College's cows, through which portions of her food in process of digestion can be removed, to be fed to rats after appropriate treatment. If the rats prosper as do others fed on a diet rich in vitamin B, it will be regarded as evidence that the cow is able to manufacture her own vitamins.

Reports that Narcosan is an effective cure for drug addiction have been the subject of bitter discussion, and, acting under the advice of Dr. Matthias Nicoll, Jr., New York State Commissioner of Health, the State Commission of Correction has recommended to Frederick A. Wallis, New York City Commissioner of Correction, that the treatment be discontinued in the penal institutions on Welfare Island until the claims for it are substantiated by scientific investigation. Critics of the treatment state that it causes intense suffering for the first few days, and that a large proportion of addicts return to the use of their drugs. Other experimenters claim that it is more humane than other treatments, and more effective, though admitting the necessity for further investigation.

Dr. Edward C. Rosenow, of the division of experimental bacteriology of the Mayo Foundation is reported to have discovered a skin test for susceptibility to infantile paralysis. Redness of the skin at the end of 18 to 24 hours at the point of injection is thought to indicate susceptibility. A horse serum immunized to streptococcus prevents toxic reaction.

Dr. Francis A. E. Crew, of the University of Edinburgh, has reached the conclusion that baldness which comes with advancing years is due to an insufficiency of thyroid. This is the result of experiments with mice. The baldness of a young man under thirty, however, he says is another matter, and practically all that is known about it is that it is hereditary.

The Wisconsin State Meeting

At the 1926 annual session of the State Medical Society of Wisconsin the following interesting business was transacted: In order that the delegate might give his county society a report of the proceedings of the House of Delegates, each delegate and each county society officer was furnished with a typewritten synopsis of the proceedings of the House and the Council. Periodic health examinations were indorsed, and it was suggested that each county society hold at least one meeting devoted to this program early in the year. A special committee was directed to investigate the nursing question and report at the next meeting. An appropriation of $2,000 was made to the Committee on Public Policy, and it was recommended that this committee urge that (1) physicians from foreign countries be required to have first papers before licensure; (2) conviction and sentence to state prison for criminal abortion shall automatically revoke the physician's license; (3) licensure for itinerants be abolished. Appropriations included $1,000 for a fourth annual lay issue to be made a supplement to the January number of the journal, and $2,000 for the continuation and expansion of the weekly press service now supplying 30 daily and 175 weekly papers with a weekly story on some phase of medicine. An increase in dues was voted.

Health News

A severe epidemic of influenza is reported from Europe. There have been a number of deaths, although the disease appears to be mostly of a benign form. Authorities in New York and Philadelphia are quoted as saying they do not expect an epidemic in this country, but ten deaths are reported in Chicago from the disease. We should be on our guard, however, for the gloomy weather that has prevailed during the past year tends to reduce the resistance, and it would not be surprising if such an epidemic were to occur.

London reports a severe epidemic of smallpox at Sheffield, with attacks of a violence unknown in England for forty years.

Each doctor today must serve 150 more persons than he did in 1900, for despite a large increase in population, only half as many doctors are being trained now as at the beginning of the century. These facts were presented before the Educational Section of the American Association for the Advancement of Science by R. J. Leonard, of Columbia University, in a survey of "Important Changes in Professional Education Between 1900 and 1925." "These figures," according to the speaker, "have an important relationship to the great increase in stringency of entrance requirements of first-class professional schools since 1900.....This increase has required higher types of men and keener minds for successful completion of the courses. It is strange that with the exception of doctors and ministers, higher standards have brought more applicants into the professional field." He states that there has been an increase in prospective nurses of 43,000.

Psychologic tests show that smoking lowers mental efficiency from ten to twenty-three per cent, according to Sir Humphrey Rolleston, of the Medical Faculty of Cambridge, who also suggested that premature senility may be induced in heavy smokers by the sedative action of nicotine on the nervous system, and that it may also produce dilatation of the stomach. Vivian E. Fisher, former assistant psychologist at Johns Hopkins University sums up the good and harm in smoking as follows: It increases the pulse rate, raises the blood pressure, causes decrease in steadiness, makes for loss of accuracy, produces greater uniformity, retards muscular fatigue, accelerates any automatic function, and increases apparent efficiency in work requiring sustained attention over long periods of time.

Youngstown, Ohio, by means of toxin-antitoxin treatment of susceptibles, has almost wiped out diphtheria, reducing the number of cases from 908 in 1922 to 68 in 1925. Not more than 35 cases are predicted for 1926, with reports still incomplete.

That the use of swimming pools during the winter does not necessarily cause colds among the students is the statement of Dr. Joseph E. Raycroft, of the Department of Hygiene and Physical Education at Princeton University. A survey of 1,000 Princeton students showed that colds and other respiratory diseases were no more prevalent among swimmers than among those who seldom ventured from the classrooms and dormitories.

The Health Committee of the Lycoming County Medical Society has issued attractive leaflets advertising the idea of an annual health examination. These are of a convenient size to inclose with bills and other communications, and might profitably be imitated by other societies.

AN INTERESTING OUTLINE of a subject closely related to improvement of health is contained in a pamphlet on "The Organized Summer Camp" by Marie M. Ready, one of *Physical Education Series No. 7,* issued by the U. S. Department of the Interior, Bureau of Education. Copies may be secured for five cents from the Superintendent of Documents, Government Printing Office, Washington, D. C. The history of the summer camp is given briefly, together with a description of the many private and public camps now maintained. Training courses for councilors and camp directors are discussed, and the value of this movement pointed out.

MEDICOLEGAL AND LEGISLATIVE NEWS

Chiropractors Convicted.—W. H. Jobe, chiropractor, of Butler, Pa., was convicted by a jury in criminal court on December 15, 1926, of practicing medicine and surgery without a license, and was sentenced by Judge John R. Henninger, on the first count of the indictment, to pay the costs and a fine of $100, and undergo imprisonment in the county jail for six months. C. N. Tolley, who was awaiting trial on the same charge, pleaded guilty, and was sentenced on the first count to pay the costs and a fine of $100. Sentence was suspended on the remaining five counts on a parole for two and a half years, on the condition that the defendants shall not engage in the practice of medicine and surgery in any form until properly licensed to do so. Each was indicted on the following six counts by a Butler County grand jury: (1) Engaging in the practice of medicine and surgery without a license. (2) Holding themselves forth as practitioners in medicine and surgery without a license. (3) Assuming the title of "Doctor" of medicine and surgery without a license. (4) Diagnosing diseases without a license. (5) Treating diseases by the use of medicine and surgery without a license. (6) Holding themselves forth as able to diagnose and treat disease without a license. On January 5th Jobe was released from jail pending an appeal to the Superior Court.

American Drugs.—On October 11, 1926, the Supreme Court of the United States declared that the Chemical Foundation has been acting legally and properly in the purchase of the foreign drug and chemical patents during the war, and licensing American manufacturers to produce these essential substances in this country. This decision is a momentous one for every one who has anything to do with drugs and chemicals. It means that the physician will have a steady and regular supply of reliable drugs of American manufacture which can never again be upset or cut off by the vicissitudes of war.

Discretionary Powers of State Fund.—According to *Pennsylvania Progress,* the Department of Justice has handed down an opinion to the effect that the State Workmen's Insurance Fund may, in the exercise of sound discretion, contract with a surgeon, physician, or hospital for surgical, medical, or hospital services to be furnished an injured employee of a subscriber after the elapse of thirty days or in excess of $100, provided it appeared likely that such expenditures would lessen the aggregate liability of the fund. Furthermore, the opinion decrees that it would be unlawful to pay the employee or the employer an amount in excess of $100 or reimburse him for treatment received after thirty days. The Board itself must make the contract in the administration of the fund.

Legislation Urged to Decrease Addiction.—The Philadelphia County Medical Society has passed two resolutions urging that the State Legislature pass laws: (1) prohibiting the sale, except upon the advice and prescription of duly licensed practitioners of medicine, dentists, or veterinarians, of barbital, barbituric acid, its derivatives, preparations, or compounds sold under various trade names, because their increasing and widespread use by the laity is becoming a distinct menace to the physical and mental health of many of the people; (2) prohibiting the sale of hypodermic syringes or needles which may be used for hypodermic, intravenous, intramuscular, or internal use, except to duly licensed practitioners of medicine, dentists, veterinarians, nurses, or persons engaged in the trade of manufacturing and selling said instruments and parts thereof, hospitals, sanatoria, and public institutions, inasmuch as probably 75 per cent of drug addicts administer drugs in this manner, and the prohibition of the sale of hypodermic needles to the laity will materially lessen drug addiction within the meaning of the Pennsylvania Antinarcotic Act.

Bill for National Health Institute.—According to the *Medical Journal and Record,* a bill was introduced on December 18 by Representative John J. Kindred of New York, proposing the establishment of a national institute of health, which would have authority to accept gifts and endowments, to establish fellowships, and to conduct research for the ascertainment of the cause, prevention and cure of disease affecting human beings. The institute would be operated under the administrative control of the Surgeon General of the Public Health Service, and $1,000,000 would be made available as an initial expenditure.

The Sheppard-Towner Act.—A continuation for two years of the Federal legislation providing an annual appropriation of $240,000 for maternity and infancy work in those states that would also make an appropriation to meet the conditions of the act, has been accepted by the Senate without roll call, with the proviso that the act shall be void after June 30, 1929.

The Mothers' Assistance Fund.—An active campaign is being conducted to secure a State appropriation of $4,000,000 to this fund, whose purpose is to assist widowed mothers to keep their children with them instead of consigning them to institutional care. The appropriation for 1925-27 fell so far short of the needs that only three fifths of the total number of families entitled to aid from this source received it, and there is a waiting list of more than 2,400 families. Furthermore, in a large majority of assisted families the aid received from the Fund is not quite 70 per cent adequate for their minimum living necessities. It is planned, therefore, to offer an amendment to the Mothers' Assistance Law making it possible to give grants larger than the present maximum where such grants are required by the minimum needs of families. New York spends 58.5 cents per capita on mothers' assistance, Massachusetts 72.6 cents, and Pennsylvania only 18.7 cents. These states and others have no waiting lists. Estimates show that institutional care costs from $20 to $100 a month, while it costs only from $12 to $18 a month to keep a child with his own mother. This is a worthy cause, and warrants the support of the profession.

An Investigation.—A request reached the editorial office during the past month for information regarding the Federal Bureau of Health Analysis, with headquarters purporting to be located at 1636 North Eleventh St., Philadelphia, Pa. Their representatives

were soliciting patrons in Harrisburg, picking as their prospects some of the more prominent business men of the city. They claimed to supply a health-examination service, examining monthly in the patron's own office, and making laboratory tests as required. So far as we ascertained, no reports were submitted in writing. Their fee was to be $30. From their own statement, their work is along "the lines of prevention. It embraces an analysis of the urine and, on occasion, blood analysis, dietetics and calisthenic exercises. The work is in charge of the following: H. L. Kulp, M.D., dietetics; M. D. Keefe, calisthenics; Prof. J. H. Ioannu, laboratory director." H. L. Kulp, is reported to have had his license revoked in June, 1920, on the court record of criminal practice. It was restored in 1924, and he is now reported to be licensed to practice in Pennsylvania, although his name does not appear on the registration list recently issued by the Board of Medical Education and Licensure. Our representative visited the alleged headquarters, found the place to be dirty and disreputable, no sign indicating who occupied the office, although the telephone directory listed the Bureau at this address. The office was locked up, but, so far as could be observed from ouside, appeared to be utterly unequipped for examination service. While no definite information is available to prove that this Bureau is doing illegal work, the above facts do not recommend the organization.

HOSPITAL ACTIVITIES

The Hospital's Interest in the Law.—Perhaps the most important phase of hospital law with which managers must be acquainted is that of liability. There are several phases of this subject: liability of the hospital on contracts, liability in injuries to patients, liability to employees, and liability to strangers in the hospital. Much of the law of liability depends upon the character of the hospital, and here is where the necessity of a clear understanding of what is a charity hospital comes in. It should be perfectly clear to any one that a hospital, charitable or otherwise, is responsible for what it agrees to do. If it contracts to fulfill an engagement, it must fulfill it.

Most legal questions in relation to a hospital hinge upon whether or not it is charitable. As a rule a hospital is charitable if it is incorporated as such without the possibility of gain to any one through dividends. How much of its work must be charitable to make the institution legally a charitable one? A hospital that is truly charitable in its work is nevertheless not charitable in law, for it was organized, perhaps for convenience, as a business corporation. Several cases of this character have been decided by the courts. Institutions that have had to appeal to the public for a large part of their funds have nevertheless been denied status as charities, for under the law and terms of incorporation, if they ever succeeded in making money, they could divide the surplus as dividends.

In the case of charity hospitals there is considerable divergence of opinion as to liability. It is important to know the rulings of the court in one's own state, since for the time being such decisions control, but it is important that the trend of decisions in this respect be understood. It should be clear to all students of the subject that the Legislature can impose by statute liability upon charitable hospitals. It is only in the absence of such legislation that they are considered to be exempt. A hospital is not compelled to give the best service that the world knows, but only such reasonable service as may be expected in the community.

Next we have the question of the hospital as a nuisance. Can a hospital be built anywhere? Obviously not. There are personal and property rights of others that may be invaded by the establishment of a hospital or of certain kinds of hospitals in a residential district. It is possible, too, for an established hospital to be declared a nuisance, if it is run in so slovenly a fashion as to be a damage to near-by residence property. When property interests in the hospital have been established they will not be interfered with except for grave reasons.—*Modern Hospital.*

Some of the Problems to be Solved in 1927.—One of the most important problems for hospitals to consider during 1927 is the cost of hospital service to the average man in the community. The well-to-do can pay for necessary hospital and professional service, and are charged accordingly. But the cost of hospital care has become so excessive that the wage earner, who represents about 80 per cent of the community, cannot meet these charges without serious financial strain. The outstanding problem of hospitals will be to provide, at reasonable cost, an adequate but more simplified service, free of unnecessary, complicated, and expensive procedures, to the patient in moderate circumstances.

Somewhat related to this matter is the question of more speedily getting the patient out of the hospital and back to work, not before he has received all the aid which the hospital can give him, but without waste of time resulting from delay in visitation of physicians, institution of laboratory or x-ray studies, scheduling of operations, or the removal of casts or splints. If but a day could be saved on each admission to our country's hospitals, the saving in the patient's time and money, during the coming year, would be enormous. At the present cost of supplies and labor, we cannot hope to cut our daily charge to any great extent. During the past twenty years, however, some hospitals have reduced the average stay of the patient 50 per cent, and this can be cut further by securing a closer coöperation from the staff, reducing the cost by reducing the days of treatment. Frequently there is too much delay in starting work on a case after the patient is admitted. Impress upon the staff the necessity of saving every hour of time for the patient, see that the interns take histories promptly after admission, so that the attending man may not be delayed on that score. See that the laboratory, x-ray, and all other special work is done without delay, and send the patient home as soon as it is safely possible; in other words, speed up every department of service.

Educate the public to establish saving accounts. Why not accounts for possible sickness? Every hospital can establish such a fund for prospective mothers, for instance, having them deposit weekly amounts, with the hospital in turn entering these payments in a passbook attractively designed so that it may become a keepsake containing a record of the baby's birth, footprints, etc., the book to be presented to the mother on leaving the hospital. A clause might be provided for 3 per cent on such deposits in order to encourage patients to adopt the plan. Such a plan would encourage saving for hospital expenses and would serve also to establish friendly relations between the family and the institution.

Other problems include improvement in workmen's compensation laws so as adequately to compensate hospitals for services rendered. Better institutional care for chronic and incurable patients presupposes scientific as well as custodial care and treatment. Better provision for convalescent patients. General hospitals today have far too many convalescent patients in their acute words. More adequate nursing service for all

classes of patients. We hear a good deal today regarding the scarcity and costs of good nursing service in the hospital and in the home. Perhaps some of the present wastage of nursing service can be prevented and the cost reduced by the organization of nurses' registries and a well-organized and supervised system of hourly or group nursing such as is now carried on in a few communities. Minimizing of the present high percentage of labor turnover. At present there is much too great a turnover in the personnel of many hospitals. Training of hospital executives. Intensive effort should be made during the coming year to provide the necessary courses recommended for the training of the various types of executives and personnel. Furthering of hospital standardization. Grading of schools of nursing. The time has arrived when we must focus attention on a uniform standard for nursing which assures the best care of the patient and the adequate education of the nurse. Counteracting of obnoxious and destructive hospital legislation. The most destructive and demoralizing factor to hospital betterment in this country is the politician with ulterior motives. In numerous states attempts are being made to break down national and local hospital standards by passing laws allowing irregulars and cults to have access to hospitals. A stronger interrelationship of hospital and community, and greater efforts toward humanizing the hospital in every way are some of the most important problems to be solved.

Still further development of the educational function of hospitals is much to be desired for the improvement of interns, resident physicians, and nurses, as well as for the protection of the patients. As a rule, the hospital in which most attention is given to teaching is the one where active investigation and research is carried on, resulting also in the best service to the patient. Provision for special, individual bedside nursing for charity and part-pay patients; provision for more bedside care for patients without "specials," and arrangements for loans for desirable women who wish to enter schools of nursing but for financial reasons cannot undertake the work, are some of the nursing problems. —*Modern Hospital.*

Salaries for Staff Members.—Dean William Darrach of the School of Medicine, Columbia University, in his annual report issued December 25, 1926, according to the *New York Times,* urged that physicians attached to hospital staffs, now unpaid, receive a fixed salary or be allowed to accept fees from ward patients. He said: "The hospital has recognized that the ward patient shall pay what he can toward the expenses of his board and lodging. Many hospitals, especially those west of the Atlantic area, have taken the next step and allowed a small fee for professional services. But this idea has not yet reached many of the eastern hospitals. The boards of managers feel that it is just to collect three or four dollars a day from ward patients, but insist that there shall be no professional charge made to these same patients. I think we would all agree that the hospital should have the first lien, but it has always seemed a perfectly proper policy for a very moderate fee to be paid by such ward patients as can afford it for their professional care. When no charge was made in the wards, the physician was very glad to give his services to the hospital, with no other recompense than the kudos that went with the position, the chance to enlarge his practice, and the satisfaction of giving service. Under those conditions, the time he spent in the hospital was usually not enough to interfere with an active outside practice. In many hospitals today this still holds true, but where the demands of the service are such as to require perhaps the major portion of his time, some additional reward is not only just, but is becoming necessary to attract and hold the type of staff desired. Facilities for private practice should include not only the opportunity to make use of the private rooms, the operating room, and diagnostic laboratories, but also examining and consulting offices for ambulatory patients. Many hospitals are now paying definite salaries to the staff of the out-patient department. This has come about partly from a sense of justice, but more often from meeting the old laws of supply and demand and of competition."

(The Pennsylvania Legislature will not permit a bill being rendered for medical services to a public-ward patient in a hospital that receives State aid, even though the patient pays the full ward rates. Any such institution proved guilty of a refraction of this rule will have its appropriation revoked.—Editor.)

PUBLIC HEALTH

Pneumonia Prevention.—The following letter was recently sent by the State Department of Health to all licensed physicians in Pennsylvania. It should receive the careful attention of our members, and we therefore reprint it herewith, together with statistics inclosed with it.

Dear Doctor:

Pneumonia in its several forms has always been, and continues to be, one of the most important causes of death. Reduction of the mortality from this disease may be difficult, but the prevention of secondary cases would seem to be largely possible and will contribute definitely to the desired end.

For the purpose, therefore, of minimizing contact with cases of pneumonia and thereby diminishing opportunity for the infection of others, the Advisory Health Board of the Pennsylvania Department of Health adopted regulations on December 21, 1926, requiring:

(1) That all cases of pneumonia, of whatever form, shall be reported, the diagnosis to be qualified by using the terms "lobar," "broncho," "hypostatic" (or other) as the case may be.

(2) That all cases of pneumonia shall be isolated, with only the necessary attendant, until recovery or death.

We are confident that this attempt to lessen the incidence of pneumonia will meet with your entire approval, and hope that we shall have your fullest coöperation in the reporting of cases, their isolation, and the instruction of those concerned in the wisdom of avoiding unnecessary visits to the patient either by members of the family or others.

Very truly yours,
CHARLES H. MINER,
Secretary of Health.

Pneumonia ranks first in the list of infectious diseases as a cause of death. In 1925 it killed 11,918 persons in Pennsylvania—more than died from tuberculosis, typhoid, measles, whooping cough, diphtheria, scarlet fever, and smallpox combined, or over five times as many as were killed by automobile, coal-mine, and railroad accidents combined. Pneumonia each year kills in Pennsylvania as many persons as live in either Bristol or West Chester, in Columbia or Carnegie—a whole city wiped out in a year.

The average death rate from pneumonia for the past five years, up to the end of 1925, shows only an 8-per-cent decrease from the average for the period of 1906 to 1910, whereas the general death rate of the State was reduced 18.5 per cent. These comparisons are for "all forms" of pneumonia, and include broncho- and lobar pneumonias, capillary bronchitis, and unspecified cases of pneumonia, but do not include the cases in which measles, influenza, or other contagious disease terminates in consolidation of the lungs.

The problem of pneumonia prevention is before us and must be met. The strength of an educational campaign depends upon the knowledge of what is prevailing, and what is shown by statistical figures as success or failure. The results of publicity by the State are dependent upon the complete coöperation by physicians in isolating and reporting all cases. The result of these endeavors will be the early and more complete seeking for medical service by persons with colds and pneumonia, and a reduction in the death rate from pneumonia.

In case of death by pneumonia, the death certificate must show as the principal cause the particular class of pneumonia, unless the pneumonia develops upon and follows some other infectious disease, as measles or influenza. In such instance, the primary disease, as measles or influenza, shall be reported as the principal or primary cause of death, with pneumonia being recorded below as the secondary or contributing cause of death.

An Epidemiologic Research in Trachoma.—One of the outstanding problems in the prevention-of-blindness campaign is the eradication of trachoma, according to the National Committee for the Prevention of Blindness, which points out that its ramifications not only involve a singularly American problem, that of the American Indian, but also an international problem, since trachoma is declared to be a reportable communicable disease and is subject to quarantine regulations. In America, says a statement issued by the Committee, the problem centers about the American Indian and the Southern mountaineer. Its eradication is aimed at by the Indian Bureau and the United States Public Health Service, the individual state departments of health, and voluntary agencies, including bodies interested in the development of the Indians.

A recent review of the literature on trachoma made by the Committee disclosed the fact that surprisingly little has been ascertained about its etiology. The past decade has rested on the germ theory, even though the literature is declared to reveal that at present no conclusive evidence has been advanced to support such a view. "In view of the fact that trachoma has international as well as national aspects, and in the light of modern medical science, which is coming to recognize external as well as internal influences on the body, it is felt that an epidemiologic study of trachoma is imperative," says the statement. "Such a study would involve not only the possibility of transmissibility, but an ascertainment of social and physical environment. It involves not only the possibility of isolating a causative germ, but a study of the living conditions, the food, and climatic conditions to which those suffering from trachoma are subjected. An epidemiologic research such as would seem to be indicated would be costly, and is likely to require a period of years for its consummation. Perhaps it may not be done within the available funds allotted state health departments or provincial health departments for research, and the United States Public Health Service and the other governmental agencies of the world should enlist. The great foundations may here find a useful field for research. Trachoma is a great international menace, and is perhaps the greatest single cause of vision impairment and blindness. This wasteful scourge remains a health challenge and an economic challenge to international health effort and to the agencies promoting administrative health work.

Posture Reports.—Two recent publications of the Children's Bureau of the United States Department of Labor will interest physicians, teachers, nutrition workers, and others concerned with posture work among children. The first is entitled "Posture Clinics," and the second, "Posture Exercises." Dr. Armin Klein, director of the posture clinic of the Massachusetts General Hospital, is the author of the former bulletin, and co-author, with Miss Leah C. Thomas of Smith College, of the latter.

These two bulletins are entirely different in purpose and scope. "Posture Exercises" offers a posture-training program for the public schools, through which Dr. Klein believes the preventive work necessary to keep the normal child from developing postural defects must be accomplished. Descriptions, with illustrations, are given of posture exercises suitable for school use, the exercises being divided into those adapted for primary grades, those for intermediate grades, and those for the junior high school.

"Posture Clinics" is intended for the use of clinics treating, not the average child, but the child with definitely established poor posture habits and postural defects.

Dr. Klein introduces the subject of posture in this bulletin by a discussion of the importance of good body mechanics and a description of good and poor posture in its relation to the bony structure of the body. This description is illustrated by diagrams of the skeleton in good and poor posture. In this connection, Dr. Klein points out that there are in any cross section of the American public distinctly different types of body structure, and that good or poor posture will vary according to the physical type. Charts illustrating posture standards for stocky, thin, and intermediate types of boys and girls are reproduced in the bulletin.

Among the physical conditions which may be the result of habitually poor posture or which may be improved by an improved body carriage, Dr. Klein includes backache, constipation, abdominal pain, general body fatigue, insomnia, and malnutrition. He emphasizes, however, the absolute necessity for thorough and searching examination, so that other factors as possible causes of such symptoms as those cited may be eliminated before poor posture can be considered the important factor.—Children's Bureau, U. S. Department of Labor, Washington, D. C.

The Weekly Public Health Reports of the United States Public Health Service are now available to all persons in the United States and its possessions, Canada, Cuba, and Mexico, for the nominal subscription of $1.50 per year, it was announced in the current issue of the official bulletin of the Post Office Department. The announcement states that these reports will be sent with postage prepaid to each subscriber, and represents an innovation by the Public Health Service further to increase knowledge about public health and sanitation. These reports contain information as to the world prevalence of disease, and each issue has special articles by experts on sanitation. Subscriptions should be accompanied by money orders, and sent to the Superintendent of Documents, Government Printing Office, Washington, D. C.

Twenty years of food and drug law enforcement have seen a gradual change in the attitude of the food industries from suspicion and positive enmity to cordial coöperation and enthusiastic assistance, declared Dr. P. B. Dunbar, assistant chief of the Bureau of Chemistry, United States Department of Agriculture, in an address given January 24th in Atlantic City at a convention of the National Canners' Association. "Food and drug inspectors," he said, "are no longer regarded as detectives or policemen, but as technicians who help manufacturers to produce legal and therefore marketable and profitable products. No change in the

policy or methods of enforcing the Food and Drugs Act is involved in the plan recently announced by the Secretary of Agriculture for creating a new administration embracing the regulatory forces of the Bureau of Chemistry. The Secretary's recommendation, which has been approved by Congress and by the President, provides for combining the activities of the present Bureau of Chemistry in enforcing the Food and Drugs Act, the Tea Inspection Act, and the Naval Stores Act, with the work of the board which now enforces the Insecticide and Fungicide Act. The new organization will be known as the Food, Drug, and Insecticide Administration, under which the laboratories of the Bureau of Chemistry, both in Washington and in the field, will operate just as they have in the past. Law-enforcement policies will remain unchanged."

INDUSTRIAL MEDICINE

The Human Factor and Industrial Accidents.—Not less than 90 per cent of industrial accidents are due in greater or less degree to some failure on the part of the human subject involved. Temporary inattention is of great import. It is influenced by monotony and distractions, by speed of production, by fatigue, and by alcoholism. The incidence of accidents is also modified by temperature, ventilation, and illumination, and by the experience and age of the workers. Instances drawn from research investigations are quoted in support of statements made to justify the claim that accident prevention must first and foremost be approached from the viewpoint of the human factor. For this purpose cultivation of a safety habit of mind in workers is strongly advocated.—H. M. VERNON, *Industrial Labor Review*, May, 1926, abstracted in *Journal of Industrial Hygiene*, October, 1926.

Street Risk of Carbon-Monoxid Poisoning.—The combustion of millions of gallons of gasoline each year is providing facilities and comfort undreamed of a few decades ago. It has often been remarked that each form of progress is carried out to the detriment of some one. The cost of changes that benefit the many not infrequently involves the comfort of a few. Manifold advantages sometimes promote minor ills. This seems to apply to the gasoline engine, which has revolutionized motor traffic throughout the world. Only a few years ago, chronic intoxication with carbon monoxid was a medical rarity, usually chargeable to leaky gas pipes that allowed the escape of contaminating "water gas." Today, carbon monoxid is recognized as a menace of automobile-exhaust gases. The annual records of deaths through careless exposure in badly ventilated garages have begun to arouse attention; at any rate, the danger is understood even if it may too often still be disregarded. When, in 1923, Henderson and Haggard, of Yale University, included city streets in the list of possible harmful localities with respect to the presence of the deadly gas, there was some hesitation in believing that the "free air" outdoors could ever become really dangerous to health. Observations recently reported from Philadelphia actually support the existence of a definite street risk of repeated or chronic slight carbon-monoxid anoxemia in congested mercantile districts of our large cities. At any rate, it is demonstrated that patrolmen who supervise heavy traffic movement may manifest symptoms of malaise at the end of a busy day's work; and the offensive exhaust gas has been incriminated by demonstration of a saturation of the hemoglobin of the blood to a maximum value in some instances of 30 per cent. Relief is not difficult when once the cause of harm is known.—*Journal A. M. A.*, August, 1926.

New Light on Tetanus.—As the result of an inquiry into the incidence and treatment of tetanus, Dr. Jonathan M. Wainwright, chief surgeon of the Moses Taylor Hospital, Scranton, Pa., writing in the *Archives of Surgery* for May, 1926, concludes that: "Intraspinal injections of antitetanus serum are harmful, increase mortality, and should be abolished; prompt injection into the vein in doses of from 30,000 to 50,000 units or more, according to the severity of the symptoms and the elapse of time since the onset, will divide the present average mortality rate by two or three or more." Further advice is given as to repeating doses used during convalescence, and the use of sedatives with the serum.

Dr. Wainwright states that "this work was undertaken with the idea of compiling evidence that would warrant urging routine prophylactic injections in all industrial wounds. As indicated by the results, this does not prove to be justifiable." Certain special conditions are noted where this routine is essential, but he adds, "When many men have gone through a generation of practice in a locality or in an industry and seen many wounds with no tetanus, it is idle to tell them that they should begin giving routine prophylaxis to all. It is no more feasible than to give it before every vaccination or operation." "The disease is one of soil contamination, and all wounds received in stables or barnyards, all contaminated or possibly so with soil or street dirt, Fourth of July wounds, and gunshot wounds should have it. In these cases a physician who failed to give it might not escape a malpractice verdict. In the ordinary industries we will have to accept the possibility of tetanus arising in the most unexpected cases and rely only on the possibility of improved curative treatment." With regard to the treatment, Dr. Wainwright shows as a result of cases personally communicated to him that intrathecal treatment increases the mortality rate.

Summary of Court Decisions in Workmen's Compensation Claims

Disease and infection—paralysis agitans. The claimant, while cutting wood for the defendant, in changing the position of a log he was engaged in splitting, fell backwards, injuring himself to such an extent as to require the assistance of a fellow workman to place him on his feet. He immediately complained of pain and injury in his back, quit work, went home and related the occurrence to members of his family. The testimony with reference to the occurrence was corroborated by fellow workmen. Claimant had for a number of years been affected with a progressive nervous disease known as paralysis agitans, which up to the time of the accident affected one arm, causing that member to tremble and shake, but the condition did not seriously interfere with his ability to work. Since the accident the claimant has been totally disabled. The court held that there was sufficient competent evidence to sustain the findings that the condition of the claimant had been aggravated by the injury, and the award of compensation was justified.—*A-4124, Natalini v. Riefler & Sons, Inc.* Opinion by Supreme Court, Eastern District, May 3, 1926.

Heart disease aggravated by heavy lifting. The employee was found dead at the steering wheel of the truck he was driving about three minutes after he had lifted a scoop out of the truck and pushed it back in place so as to permit the next truck to drive under it. The scoop weighed about two hundred pounds and ordinarily required two men to lift it into place, but on this occasion the decedent, unassisted, lifted the scoop into place after having loaded his truck. There was

testimony on the part of the doctors that the most probable cause of death was strain due to the unusual lifting, and the court held that the medical testimony and circumstantial evidence were sufficient to sustain the conclusion reached by the referee and Board and affirmed the award.—*A-4636, Durga v. Walter Williams.* Opinion by Common Pleas Court, Cambria County, April 29, 1926.

Tuberculosis. An employee who was in an advanced stage of tuberculosis strained his back while assisting several other employees to push a Ford truck into a substation of the defendant company. He continued to work, and two or three days later the condition was aggravated when he attempted to carry a bucket of coal into the substation. He was immediately disabled, was confined to his bed almost continuously for six weeks, was never able to return to work, and died of tuberculosis about one year after his first injury. The court held that the finding of the referee, affirmed by the Board, that the injury aggravated a tuberculous condition and hastened death was supported by competent evidence, and dismissed the exceptions to the decision of the Board.—*A-4558, Armstrong v. East Penn Electric Co.* Opinion by Common Pleas Court, Schuylkill County, January 18, 1926.

AN ABSTRACT REPORT OF THE TRISTATE MEDICAL CONFERENCE

A meeting of the Tristate Medical Conference (New Jersey, New York, and Pennsylvania) was held at Atlantic City, December 4, 1926. Our State Medical Society was represented by President Albertson, President-Elect Morgan, and Editor Hammond. Dr. James S. Green, president of the State Medical Society of New Jersey, presided.

The Qualification of Nurses, and the Regulation of Their Relationship to the Medical Profession

Dr. Nathan B. Van Etten, Chairman of the Special Committee on Nursing of the Medical Society of the State of New York: I have been interested in the study of the nursing question for several years, and have also the additional honor of being the Chairman of a Special Committee appointed by the Trustees of the American Medical Association to study the nursing question in the United States. I have been very happy to come here because I felt I was coming to a group of men all of whom had studied this problem and who very likely would give me some information which would help to develop what we all so very much desire —the provision of a fundamental nurse who will be of real service to the community. We have all kinds of nurses, various sorts of special nurses, but we are trying to find the nurse for the man who is sick in bed. We want to start thinking about the patient, and come to the nurse problem from the standpoint of the patient—not so much from that of the doctor or the community.

A resolution which was introduced in the House of Delegates of the American Medical Association at Dallas created the committee of which I am the chairman. That resolution perhaps presents the keynote for our discussion:

Resolved, That there is great need throughout the country for a basic trained nurse and that all pupil student nurses shall receive basic training, in training schools, in hospitals giving courses of 2 years. The curriculum shall be definitely revised so as to provide bedside instruction, classroom instruction and demonstrations, and above all, the teaching of the art of nursing by precept and example so as properly to fit the pupils or students for their work as nurses in the hospitals and in the home. Graduates, after passing the state examination should be registered as trained, or if preferred, registered nurses. Such a trained or registered nurse may become a public-health or other special designated nurse after being properly admitted to postgraduate schools for nurses and passing a required examination.

Resolved, That the Board of Trustees appoint a Committee on Nursing to investigate and report to the next House of Delegates the results of its investigation and constructive light on the nursing question, and especially on the subject of increasing bedside nurses throughout the several States, the Committee on Nursing to be empowered to confer with the National Nurses' organization, hospitals, and other organizations having similar objectives.

The following report dated November 1, 1926, of the Special Committee on Nursing of the Medical Society of New York, was presented. The important points were raised by doctors, nurses, and the laity:

The matters coming within our province have been much discussed by individuals and considered by committees representing various bodies for some years past and numerous articles and reports have appeared relating to them. Some of these committees have had paid help or organized staffs, and some of them, notably one representing several national medical and nursing organizations, are still functioning. We concluded that no purpose would be served by going over this same ground, but believed that a concise statement of the issues raised, facts developed, and remedies suggested for the perusal of the membership would be of value. We have, therefore, ourselves attended meetings, sought information on the subject and had a review made from all available sources, and offer the following:

By Doctors

Supply of nurses inadequate.

A demand for several grades of nurses to meet varied requirements of patients.

Lack of spirit of sacrifice and service on part of nurses.

Requirements for applicants too high, course too long, curriculums too elaborate, not appropriate, examinations absurd.

Nurses overeducated, so overstep proper limitations and have distaste for or refuse to discharge more homely duties of position. Often an added burden in household of sick person.

Nurses not practically educated.

Rate of pay so high persons of moderate means cannot afford the service they ought to have.

Nurses refuse 24-hour duty and pick and choose types of cases they will accept.

Commercial registries practice deception as to qualifications and character of nurses supplied.

By Nurses

Any inadequacy of supply due to fact nursing no longer competes economically with alternative positions and careers.

The graduates from nursing schools today are superior in all respects to those of the past, and the complaints as to spirit of service, 24-hour duty, overeducation, etc., come from persons who forget that the ideas and standards of 25 years ago are gone forever.

Financial rewards on whole are meager—few executive, hospital, public-health, and teaching positions well paid; "specialing" in good hospital quite remunerative; charge nurses in hospitals fairly paid; most private-duty nurses earning poor annual pay; salaried nurses only better off than last because of hours, conditions of work, continuity of employment, sick benefits, and pension.

Hardly any hope of providing for later years.

Increase in pay since war has not equaled increase in cost of living or increases in other lines of employment.

Aside from pay, nursing contrasts unfavorably with other competitive occupation because it requires longer training; by the hours of work, it destroys social life; its continuous work is unhealthy, and uncertainty of and interrupted work is demoralizing and unprofitable; the conditions of work including status in household are unpleasant to offensive; and community life in institutions appeals only to limited numbers. Except in salaried positions all vacation, sick, and other lost time is at expense of individual. As years pass, opportunities except for few retrogress rather than improve. There is no advancement, the recent graduate being on a par with or preferred to those with years of service.

Despite attempts at State registration and license, there is still looseness to chaos in the nursing field, and the qualified nurse must meet unfair competition.

Nurses exploited by private registries.

Doctors have by organized effort raised standards of medical education and licensure and greatly improved conditions of work even for general practitioner, and have raised scale of fees. Nurses are only striving to do same, with emphasis at present on first of these.

Facts Developed by Various Investigations

Only really acute situations seem to be: (1) Cost of adequate, competent nursing service to persons of moderate means. (2) Lack of pupil nurses in smaller hospitals.

Number of applicants for training in other than R. N. courses is small (two grades licensed by State). Whether this is due to small difference in requirements, great difference in advantage to pupil on graduation of superior rating, or that there is not enough fixed demand for persons of lesser personal and professional qualification to attract larger numbers is not determined. Probably all contribute, and attitude of applicants, nursing schools, medical profession and public combined to problem has led to small development of this field.

Whether standards as set now (for instance in New York State) are too high by no means agreed even among doctors. Some states have higher requirements than ours and refuse to license New York graduates.

Some revision of curriculums and examinations desirable to make them better fit the objects in view and remove just cause of criticism.

Yale school of nursing and similar movements do not touch broad questions involved but aim, on own statements only, to train executives, teachers, and the like.

Social and working conditions have probably as much or more to do with adequate supply of nurses as question of pay.

The attempt of smaller hospitals to run training schools is futile under present requirements.

There is a large loss of graduate nurses by marriage—a lesser loss by transfer to other more attractive occupations.

Nurses under present conditions prefer salaried positions to private duty.

There are large numbers of total registered employed by public departments, hospitals, visiting-nurse organizations, other private and semipublic associations, in industrial work, as office assistants, etc.

The demand for and adequate supply of bedside nurses is most seriously influenced by season and prevalence of illness with periods of shortage and oversupply.

There is a considerable amount of use of nurses, even in times of stress, in luxury service.

Private-duty nurses, by and large, even in New York City, make only a moderate living on an annual basis.

It is questionable whether there is really a demand for nurses of lesser qualifications or for the present type at a lesser price.

Central registries under professional control, where started, have been found advantageous to nurse, doctor, and patient.

Training schools in tuberculosis and such institutions are desirable, and their problems should be given careful and sympathetic consideration.

Suggested Solutions

Basic simplified course of training of shorter duration, with provision for advanced training and training for special service.

Group nursing by which nurse's time is better used, with shorter hours and larger remuneration to her and lessened cost to patients.

Hourly nursing with same objects.

Intensive effort properly and adequately to develop training and use of other than most highly qualified nurses.

Multiplication of professionally controlled noncommerical central registries.

. . . . . .

Your committee having studied this material makes the following observations:

In the solution of this problem it is well to keep in mind the matter is not being considered *de novo* but that the framework of whatever settlement is finally reached has probably already been erected beyond prospect of taking down.

Nurses today are a numerous, intelligent, well-organized, responsible group recognized as an independent profession by law.

Any decisions which the medical profession make must recognize these facts, or there is no hope of their being put into effect.

The trend, and rapid trend, of American standards of living is away from such hours and conditions as now surround bedside nursing. The medical profession would do well to take an advanced position in this matter.

The only source of nurses, in the last analysis, is young women who will voluntarily take up the work because, all things considered, it offers an attractive career or return in comparison with other opportunities.

So long as there is no rapid fall in present-day money standards, the prospect of securing any large supply of nurses of minimum acceptable personality, education, and training at sufficient reduction from present rates of pay to be of any consequence is nil under present conditions. Keeping these things in mind we endorse the solution noted above, as the only reasonable one which has thus far appeared. These points only cover a part of the problem.

Some further progress might be made by widely popularizing such courses as that of the Red Cross Home Hygiene and Care of the Sick, and using to a much greater extent the services of those so trained.

Mr. Charles S. Pitcher, Superintendent of the Presbyterian Hospital, Philadelphia, Pa.: The ideas which I express are not entirely mine, but are ideas and reactions produced by observing physicians and nurses for many years in their work, and reading and listening to their comments. Nurses make almost the same criticisms of their profession as physicians do of theirs, and some ideas of both groups may be unsound. A nurse leader with whom I was discussing the question of the present status of nurses emphasized these points:

"First, as to the qualifications of the nurses, that they must be qualified to meet, not only the demands made upon them by one particular city or one particular group, but they must be prepared to meet the demands made upon them by society as a whole.

"As to the regulation of their relationship to the profession, I believe the doctors should begin to think in terms of nurses as citizens, and therefore, having a responsibility to society from the standpoint of citizenship. Their relationship to the profession of medicine will be very much the same as their relationship to all of the professions, inasmuch as one can honor a profession or its responsibilities just in so far as the profession or its responsibilities are worthy of honor. That is true of the nursing profession, of the medical profession, or of any profession."

There is a grading committee now at work for the purpose of grading the training schools of the United States in much the same manner, I understand, as hospitals have been graded by the American College of Surgeons and the American Medical Association. The Secretary of this committee, (Mrs.) Ayers Burgess, Ph.D., who is directing the study, is not a nurse. The Committee represents all groups interested in the matter of nursing.

A well-organized school of nursing should have carefully thought-out nursing procedures which are understood by the physicians and ordered by them in the treatment of their patients, for by this method the physicians and surgeons know that in each department of the hospital, unless otherwise ordered, the standardized procedure will be followed. It is the belief of a number of hospital administrators that with a standardized staff meeting, and with standardized nursing procedures, the care of patients would be so well understood that there would be better and more harmonious relations between the physician and the nurse, the patients would be better cared for, and the standards of medical and nursing care would be improved, since the responsibility for any mistakes could be placed on whichever group was at fault.

Some members of the hospital visiting staff make a deep impression on the interns and nurses through their willingness to explain the condition and the treatment of patients. Interns are anxious to be on their services and nurses are delighted to care for their patients. If this practice were more generally followed by physicians I believe there would be much less complaint of inattention of interns and nurses than we have at present.

There is no doubt the nursing profession on private duty work is unorganized, unsupervised, outgrown, and there is a great deal of waste in nursing skill. I think that is conceded by nurse leaders. It is known that irregular employment is what keeps the salaries of the special nurse down. We had a meeting some three years ago in Philadelphia of the representatives of the medical society and the nursing profession. I was there representing the Philadelphia Hospital Association, and they estimated that the average nurse's salary was about $1,200 a year, and that a nurse was probably not employed more than 75 to 80 per cent of her time. The suggestions which have been put forth for a central clearing house for nurses is a very good thing. Whole-time-duty nurses in hospitals will fight that to the limit because they want to nurse in one particular hospital, but I think it is a mighty good thing. I think organized hourly service is a good thing, and I think such nursing in hospitals is a good thing. Some doctors opposed it, the nurses opposed it, and I think the only way it can

be worked out is through the hospital hiring these group nurses and paying them, and charging it on the patient's bill, because you cannot get any two or three or four patients to agree that they will pay so much to the nurse. I think that would solve quite a lot of our shortage of nurses. The nurses may think that will cut down their opportunity for work. I think it will, on the other hand, give them assurance that they will receive a certain salary. I know one hospital in Chicago where they have two nurses whom they pay themselves and whom they send out into the community.

Dr. Van Etten: Are they follow-up nurses?

Mr. Pitcher: No. They are sent to homes where the family cannot afford a whole-time nurse. Dr. Baker, of the Presbyterian Hospital, is the organizer of the movement. I think these nurses will receive more remuneration than they do at present, although the nurses themselves do not think very well of it, and I feel that their time will be more fully occupied. In order to get these things done we must first get the doctors to agree to their patients having group nurses, then get the nurses to agree to do group nursing in this manner, and I think the hospitals can take care of this by hiring the nurses and charging it to the patients. I think we may have some such group nursing at our hospital, and I believe it is a very good thing.

Dr. James S. Green: In my hospital in Elizabeth it is a common sight to see on the private floors, after the patients have been given their breakfast and been washed and cared for, the nursing force sitting around knitting and reading books until the time for the next meal to be served. It is a great waste of the time and money of the patients. But we see that the nurse association has come out flatly against group nursing. If we can get some suggestion as to how this can be put over it will be of great benefit. A patient of moderate means who thinks he must have a private room cannot afford some of the special nursing charges, and I think that question would be solved to a certain extent by the group nursing, and it would also give the nurse more continuous employment.

Mr. Pitcher: As has been pointed out, the nurse goes on duty at seven o'clock, takes care of the patient, and then has nothing to do until time to serve the next meal. Here is another thing that I have observed, and others have called attention to it, too: It is stylish to have a special nurse, and therefore the patient must have one whether she needs her or not. I wonder if the doctors could in some way get patients to discharge their nurses earlier? We may have a very ill patient in the hospital, and usually, if the doctor will ask his patient to release her nurse to go to the patient who so badly needs one, she will refuse. I do not know what can be done, but there is a lot of nursing going to waste.

Dr. Overton: May I ask what, specifically, is group nursing?

Dr. Green: As I understand it, it is an arrangement by which a nurse looks after two, three, or four patients in the private rooms, just as a nurse in the ward looks after four, five, or six patients, and it can be done, in my opinion, just as well as in the wards. But the patients will not, of course, have a nurse constantly sitting at the bedside.

Dr. Frank C. Hammond: Pennsylvania requires eight hours of psychology in the training course. A member of the State Board with whom I talked said she would rather see the entire laboratory course in chemistry wiped out than to have the lecture on psychology omitted. Her feeling was very definite that nurses should know something about psychology. She felt that twelve to fourteen hours should be devoted to that subject.

There is another question: So far as the State Board of Medical Examiners is concerned, any one who is a dean in a medical school cannot be appointed to the State Board of Medical Examiners, yet you would be surprised to find the number of states where the directress of nursing is on the Board. It seems to me, if there is a basic motive back of it, if the deans of the medical schools possibly would use their position to facilitate licensing of graduates from their own schools, why would not the directress appointed on the Board do the same thing?—not that we would impugn any one's motives.

I should like to ask Mr. Pitcher about the question of board for the special nurses in the hospital. A man who is taken sick nowadays and goes to a hospital must be a pretty rich man. He is charged so much for the room and the operating room, a special day and night nurse, then there is a charge for a lot of unnecessary laboratory work—all of which adds to the expense of the patient, and our chief interest is for the patient. The day nurse receives $35 a week, and many of them require $12 to $15 more per week for board, depending upon the hospital. Then there is so much for the night nurse and her board. What does Mr. Pitcher think of the rule so many institutions have requiring day and night nurses to get their three meals a day at the hospital? Many men in employment who earn the same wages have their breakfast at home, carry their luncheon, and get their dinner when they return home. I cannot understand why it is that special nurses should expect the patient to pay for their three meals. When you have institutions where it is against the rule to have a 24-hour nurse, but must have a 12-hour nurse, I have often wondered what the condition would be if you had an 8-hour nurse and had to feed the three nurses nine meals.

So far as the revamping of the curriculum is concerned, one thing that appeals to the administrator of hospitals is the percentage of time given to the class room and study in the hospitals. We have a great deal of difficulty with the superintendents of nursing in trying to induce the head nurse to transfer her nurses for an hour or so to fill in an emergency gap. The argument is that they must have a certain amount of time in this or that and they could not be allowed to leave to meet an emergency on another floor. That seems an absurdity, but what I am leading up to is this: When you consider the time that a girl takes off for her breakfast, lunch, and dinner, and for off-duty a couple of hours to get fresh air, and the amount of time she is in class, you will be surprised to see in a general way the exact time that she gives to the institution compared to what nurses gave ten or fifteen years ago. The State Boards are forcing this requirement. Sometimes the nurses have to leave the institution and go three or four miles to get the laboratory work or other special instructions properly belonging to the curriculum that must be met.

Dr. A. C. Morgan: The thought appeals to me in this manner: Is it the doctor, the nurse, or the public that has demanded the increase in educational standards of nurses? Is this a part of the ill-effects of the wild educational propaganda that was advocated by the Association of American Medical Colleges twenty-five years ago, and then was taken up by the American College of Surgeons, and is now being discussed by the American College of Physicians? Is it an aftermath of the educational mad wave that swept across the country, and succeeded in eliminating so many medical institu-

tions of varying degrees of excellence, so that we have dropped from 140 medical educational institutions in 1900 to only 80 today? Of these 80 schools, 10 give only a two-years' educational course, and 10 of them do not attempt to give any clinical work. That has caused a considerable damming of the current with regard to medical circles, and the need for physicians has become acute, especially in the country districts. Is this an aftermath, or is it a by-product of that move which started years ago? Did the doctors years ago demand, *pari passu*, that as medical students should be trained to such a high degree, the nurses likewise should be trained to the same extent? If so, then the doctors are to blame, because the consensus of opinion throughout the country seems to be that they aimed too high, and now they are beginning to revise many of their older idealistic views with regard to medical education. Are we facing the same condition of affairs in the matter of nursing? Were the demands and the requirements placed too high twenty-five years ago and too rapid an idealistic pace set, so that the nursing profession is suffering in the same manner as is the medical? If so, then the medical profession is at fault. On the other hand, is this demand for a higher education, and is the present arrangement of nursing education an outcome of the recommendations of the women themselves who are in charge of nursing boards? Or of the doctors who have been in charge of nursing boards? If it is chargeable to the women who are the leaders in the profession of nursing, whether national, state, or local, then we feel that they in turn are suffering because of the wrong example set years ago by those men who aimed too high. Is it the public that requires this matter of higher education on the part of nurses? We think not.

I can see readily how group nursing can be established and applied and made to work successfully in every hospital if it is applied to the system of nursing in the semiprivate wards. Let that be the starting point, and let it be understood that because the man or woman is in a semiprivate room rather than in a private room, he or she is supposed to share the duties and the time of that nurse proportionally. Let that be well worked out and demonstrated, and it can be later applied to the more expensive rooms. But let it be understood that by their acceptance of those lower-priced rooms they must also permit group nursing to be carried on.

I approve of Dr. Van Etten's description of a basic nurse, especially as regards the two-year course. We can well train a woman in two years' time to be a nurse—not to be a technician or an executive, but a real trained nurse.

Dr. Harry W. Albertson: Some years ago, in the Medical Society of the State of Pennsylvania, a special committee was appointed by the Board of Trustees to study this particular question. We gave a good deal of thought to the subject of nursing and we did not get very far for our pains. Doctors created the nurses for their assistance. To my mind the nursing situation has outgrown the doctor. We are no longer able to control, to teach, and to guide these people in the way that we formerly did, nor in the way that we should today.

The salary of the nurse, as found in a survey that I made of my own hospital with a number of nurses several years past graduation and still in service, is much smaller than stated by some one here. I was able to get in close touch with the girls whom I have assisted in training for a number of years, and I found that the average salary amounted to but little more than $800 a year, counting their time off waiting for cases, etc. That was the total income, averaging it up over a long period of time. Certainly it was not a sum sufficient to induce girls of the proper type and spirit to take up the work. We are demanding too much for the little that they get out of it.

Certain sections of the State of Pennsylvania have become very much stirred up over this nursing proposition. Night before last I attended a meeting of the York County Medical Society, and there they have been very much wrought up because graduate nurses were appointed by the State Secretary of Health to examine school children. They took exception to that, stating that was not a nurse's duty, that she was not competent in the first place to examine school children properly and that she was illegally practicing medicine. They took the matter before the Board of Medical Licensure of the State of Pennsylvania, where it was threshed out after they had been given a very cordial reception. It would necessitate many unpleasant features, of course, if the members of that county society should ask for prosecution in such cases, and this they did not want to do.

That is only one phase of the subject, however. In my particular community, five years ago many of the industrial concerns took on nurses to do first-aid work when the Workmen's Compensation Act went into effect. They were practicing medicine, and the limit to which they went was outrageous for a while. I was once called to see a patient of mine, a miner, a very good man, who always paid his way and was capable of doing so. He had been burned in the mines, and first aid was rendered by the nurse. He was sent home, as he refused to go to a hospital. I was called in, and on the second day when I went back to do a dressing the nurse came in and in her rather glib way fairly ordered me from the case. It did not take me long to tell her where to get off.

I am afraid Mr. Pitcher, as a superintendent of a hospital, does not see the effect of this kind of thing upon the medical profession outside. I had hoped that the relationship of the nurse to the doctor would be discussed as a part of the papers this morning, for I feel that we must endeavor to curtail the activities of these young women who have taken upon themselves the practice of medicine. The original reason for this is simply that nurses are overeducated; they are not overtrained. I venture to say that any of you who practice general medicine and employ nurses do not find that they are overtrained, but they are overeducated. It is a very difficult matter to get a good trained nurse. It is the easiest thing in the world to get one that is overeducated. I feel that the course of two years is quite sufficient.

In the city of Scranton the District Nurses' Association has tried out hourly nursing for the last five years, and the head of the Association states that it is a miserable failure, that not enough people seem to appreciate it. If you were sick, would you want to pay a trained attendant $2 or $2.50 or more an hour to come in and make your bed, give you a bath, comb your hair, and look at you? That can be done by a member of the family. There is not much need, in my opinion, for an hourly nurse. She cannot do much more in an hour than put the family on the right track, and the nurse refuses to stay more than two hours. If you can pay for that you might as well have a nurse by the week.

There is, in my opinion, a serious need for young women, well trained, who will earnestly undertake nursing, earnestly endeavor to take care of sick people without the thought of being physicians.

Dr. Green: The question of nurses performing the duties of doctors in institutional work, that is, in factories, schools, etc., is one that I am sure exists in almost every community. I know it exists in Elizabeth, and instead of diminishing it is increasing.

Dr. Walt. P. Conway, Atlantic City: A few years ago we did have a very acute shortage of nurses and were considerably handicapped, but that has been relieved to a great extent, and now I think our register contains something like 240 or 250 nurses. A few years ago we doctors started a registry here in a drug store, and had about 20 nurses on it. Now there are two registries, one containing over 200 names and the other about 150. The registration fee is now $15 a year; it used to be $1. Salaries are probably higher than in other cities. Our graduate nurses receive $7 a day. Two nurses on a case receive $6 a day each. The hospital case is required to have two nurses, a day and a night nurse. The hospital receives $2 a day and the nurses each $6.

We are experimenting with group nursing only to a very limited extent. On a floor where there are two small private rooms the head nurse has been trying it out, and nurses from the private wards sometimes take care of patients in the smaller rooms. In medical cases they can care for them from the beginning, but in operative cases only after forty-eight hours.

Hourly nursing is being given considerable thought. In the hotels some individual may want a nurse for several hours in the morning, for which she will pay $2. Sometimes an elderly person will want a nurse to sit with her. Several of these practical nurses go out giving colonic irrigations, for which they will receive a fee of $2. Some of them give massage and an alcohol bath, for which a fee of $2 is charged. In our hospital we are fortunate in that our own nurses act as missionaries and send us other nurses for training. Canada sends us a great many nurses. We have about forty nurses, fifteen or eighteen of whom are from Canada. We have a large number of pupil nurses coming in each year from Canada. Whether it is the attraction of the city or the hospital I do not know, but they make excellent nurses. As a rule they are a higher class of girls.

Dr. Green: Do you have any difficulty in getting the nurses to take certain cases? Do they select just the kind of cases they want?

Dr. Conway: Yes, they are rather particular after they have been out for a few years, but the recent graduates will go on almost any kind of case.

Dr. Morgan: Have you any nurses that insist on the eight-hour nursing time?

Dr. Conway: No, they work on the twelve-hour plan.

Dr. H. O. Reik: I have been very much interested in the nursing problem for a great many years, and was at an institution in Baltimore at the time it was opened which has had a great deal to do with developing the condition that Dr. Albertson and Dr. Morgan have referred to as overeducation. It has thoroughly run away with us in that part of the country.

Would it be wise to go further, to let the Conference ask the respective state societies to send any recommendations taken here today to all of the hospital training schools in this district, seeking to secure their assistance in the solution of the problem?

We might adopt Dr. Van Etten's definition of the *basic nurse,* and possibly go further and adopt the principle of providing for the education of the basic nurse which does not exist today as a fundamental proposition in the training of nurses, as compared to the higher education now given to the registered nurse and the provision for specialists after they have become registered nurses. I wonder if Dr. Van Etten thinks that the situation is such as to justify us today in taking some such action, adopting his definition, adopting the principle of providing for the education of the basic nurse, and of calling upon the institutions in this large territory to coöperate in the development of such plans?

Dr. Van Etten: I feel that we are really a fact-finding committee. We are eager to get a basis, to discover what is the basic nurse. I wrote down the following definition in order to submit it to you and ask you what you think of it. I should like to have it broadcast as far as possible and get a reaction from that in order to find out what the country thinks of it.

"The basic nurse is a graduate who has completed the hospital training-school course in the theory, practice, and art of nursing in two years, and is fitted to nurse patients either in a hospital or at home."

That is the definition that I present as my idea of the basic nurse. I do not feel that we should try to force that definition upon people, but we should see whether they like it or not and whether that is the real definition that the American Medical Association and the state societies are after; whether we think that we can educate a nurse sufficiently in two years to make her a valuable nurse for the sick patient. We must nurse the patient and we must maintain the relations between the doctor and the nurse, and if the nurse is overeducated the doctor is out of joint with the nurse and he will never get back until the nurse is fundamentally educated. We have no objection to educating a nurse beyond that point, but we think that should be the fundamental education. We feel that the public-health nurse, for instance, should have a very much wider education. All the nurses that go into technical work should be postgraduates in the various fields which they take up. Dr. Lawrence feels, and I agree with him, that the public-health nurse should start in a different way from the basic nurse. The basic nurse can go through the hospital from the inside, and the public-health nurse should go from the outside, and does not require perhaps all the intensive training in the art of nursing that is required of the hospital nurse. If you endorse this definition of the basic nurse as an expression of this group it satisfies me.

Dr. Reik: I move that we accept the definition of a basic nurse as given by Dr. Van Etten. Carried.

The Prevalence of Rabies and the Need for Laws Requiring Vaccination of Dogs

Dr. Henry O. Reik: There is positive evidence that rabies has been on the increase in New Jersey during recent years and that this statement applies also to other portions of the nation. Our present antirabies laws do not seem to be effective as a means of controlling this disease, and the menace to the people appears to be sufficiently grave to warrant consideration of legislation intended to prevent further spread of the trouble. In New Jersey this is shown by the figures that in five years since 1920, there were ten deaths reported from rabies. In the first ten months of this year there have already been seven deaths from rabies. The increase is also shown in those six years as to the number of dogs' heads examined by the State Department, a steady increase from 64 in the year 1917 up to 367 in the first ten months of 1926. Taking this year alone, for instance, at the Health Department at Trenton they have found from the examination of heads of dogs 202 positive cases, with 45 negative and 20 doubtful.

In this State we have vaccination for dogs in certain limited districts (a few of the smaller cities and towns), but dogs do not recognize the boundary lines, of course, and sentimentalists have prevented vaccination of dogs in some towns. We had a law in Atlantic City, but, much to the disgust of the medical profession, the Council met and repealed it. So the State authorities have been considering the advisability of making a vaccination law state-wide and introduced a bill at the last session of the Legislature. It was adopted by the House but reached the Senate so late that there was no time for action. The bill provides that:

> Every person owning or harboring a dog within the State of New Jersey shall, on or before the first day of July, in each year, apply to the clerk or other person designated by the governing body of the city, town, borough, village or township within which said persons may reside for a license for each dog owned or harbored, at which time said person shall present and file with the clerk or other designated person a certificate signed by a licensed veterinarian of the State showing that said dog has within 30 days been vaccinated against rabies, whereupon, after paying the fee hereinafter set forth, the said clerk or other person designated shall issue to such person a license together with an official tag, which shall be fastened and worn at all times on the collar of the said animal, or in lieu of said certificate of vaccination the person making application for license shall certify to the satisfaction of the clerk or other designated person that his or her dog will be kept muzzled, and said dog shall at all times when running at large be effectively muzzled.

The Health Commissioner is not insistent upon the exact wording of the bill, but desires to secure some legislation providing for the vaccination of dogs against rabies. Statistics are given to show that while this is not an absolutely certain protection any more than vaccination is a certain protection against smallpox or antitoxin against diphtheria, the statistics show overwhelming evidence in favor of this attempt to control rabies in the animal to prevent its spread to the human being. This bill will be reintroduced at the coming session of the Legislature.

All three of our states are having legislative sessions shortly after the first of the year. One of the primary reasons for establishing this Tristate Conference was that we might be able to coöperate to bring about uniform legislation in this territory, and so this matter is submitted with the object of asking whether New York and Pennsylvania would feel inclined to make the same effort, at the same time, to secure this kind of legislation in their respective states.

Dr. Campbell is here, representing the Pennsylvania Department of Health, to discuss this matter. Before he speaks, may I present the following letter:

> My dear Dr. Reik:
>
> As you probably gathered from the correspondence which you have had with Dr. Nicoll, it was arranged that I should be present at your meeting on December 4 to discuss the question of compulsory vaccination of dogs as a preventive of rabies. However, this morning Dr. Nicoll and I have discussed the question and we find that it will be impossible for either of us to attend.
>
> As he stated to you in his letter of the 26th ult., the Public Health Council of this State is not entirely convinced of the value of such regulations for the control of dog rabies. You may be interested to know that we have reports of five dogs having been vaccinated for rabies during the year 1925 which subsequently died of rabies; the intervals between vaccination and death varying from twenty-six days to almost one year. These instances all occurred in communities where there had been considerable agitation for vaccination and where the owners voluntarily had about 3,000 dogs vaccinated. I do not know as to the total number of dogs there were in the section of the State where these cases occurred, but I have the feeling that the proportion of deaths from rabies among the unvaccinated dogs in that part of the State was not much higher, if any, than the ratio among the vaccinated.
>
> I have talked with Commissioner Harris of New York City regarding his attitude on this question, and he states that he has been misquoted in the newspapers in regard to his plans for requiring vaccination of dogs. He has the same attitude that we of the State Department of Health have—that of open-mindedness and seeking further information before advocating a procedure which, to our minds, has not been proven.
>
> Yours very truly,
> (Signed) Edward H. Marsh, *Secretary.*

Dr. Harris, Commissioner of Health, New York City, has expressed himself very emphatically, and is also asking for legislation to cover this point. Dr. Marsh calls attention to the fact that there have been within the last few years several cases reported in which vaccinated dogs had afterward developed rabies. Of course, there is no doubt about the correctness of that. We have cases of smallpox and diphtheria develop where persons have had vaccination or toxin-antitoxin. That always brings up the question of the accuracy of the virus and the technic that is employed.

I submit this as coming from the Health Commissioner of New Jersey with the statement that he is going to ask for such legislation in this State and he hopes the Conference may see fit to recommend to the medical societies and the health boards of New York and Pennsylvania that they also endorse the same kind of effort to secure this legislation in their states.

Dr. Campbell: Pennsylvania apparently has not had the same increase in rabies during the last few years or months as has New York or New Jersey. There have been during this present year six deaths from rabies in Pennsylvania. In 1913 the Legislature passed what we may call a supplement to the Poor Laws of the State which provides that the Health Board shall see that indigent persons who are bitten by rabid dogs shall receive treatment without expense. The difference in the death rate occurs right there, so it seems that the law has had some effect. Prior to that time we had more deaths from rabies. From 1913 down to the present time our median number of cases has been six. We are now just on our median line, in 1926, no better and no worse. So that Pennsylvania has not had apparently the definite increase in human rabies that the other States in our neighborhood have had, though we have had a slight increase in canine rabies.

The State Live Stock Sanitary Board reports to us that the average number of cases of rabies of dogs and other domestic animals has been somewhere between 120 and 150. This year, however, there have been 190 cases of rabies reported, so we have some increase in animal rabies but no increase in human rabies.

As a means of controlling rabies, vaccination is the key to the situation. In Pennsylvania we depend practically altogether on quarantine and destruction of the dog. We have rather complete laws covering the whole question, not directly referring to rabies, but to diseases among animals. We have a perfectly good dog law which requires licensing and is enforced. The report of a case of rabies from any community means the immediate presence of the county veterinarian. Quarantine is established immediatey after his arrival. Animals that have been exposed are placed in quarantine, and if there have been a number of rabid dogs and the exposure has been wide, these quarantines are for ninety days. The Pennsylvania authorities feel that they have very little to hope for from vaccine as a means of eradicating rabies, but I think it is entirely comparable to our attempt to eradicate typhoid fever in a civil population by vaccination. The "roaming dog" or cur is looked upon as being the real menace.

At the conference of State Officers held in Washington last May, at the office of the United States Public Health Service, one whole morning was given up to the discussion of rabies among animals. We were told there had been a very definite increase among the states. The discussion brought out that an officer of the United States Public Health Service who has been particularly assigned to rabies investigation felt that vaccination would not control the disease, that we had better lean on quarantine and the destruction of the worthless dog. There are probably several, at least two, strains of rabies infection. The vaccine that has been used so far has been a monovalent vaccine. You

cannot, therefore, vaccinate a hundred dogs with any real success against rabies if there are, as they say, two strains of rabies, and a polyvalent vaccine has not yet been made. In Pennsylvania, I doubt very much whether anything can be done in the way of pushing compulsory antirabic vaccination of dogs. We are not convinced, and we feel that a majority of those in this line of work are with us, that vaccination has not so far proved of sufficient value to be formally recommended by state societies.

Dr. Reik: In view of the letters from Dr. Nicoll and Dr. Marsh and the remarks of Dr. Campbell, I think it would be unwise to introduce this resolution because this Conference must be unanimous upon any question. Of course, the answer that those in favor of vaccination make is that the quarantine does not catch the roaming dog.

It was decided at the Philadelphia meeting that we should have three meetings per annum, one here in the fall, one in February, which is about the middle of the legislative session in the different states, and one in the spring. Following this custom, it would be New York State's turn to have the next meeting, and I should like to have, as the secretary of the Conference, some suggestions as to what must be put on the program at that time.

Dr. Fisher: We in New York State have been very much interested in our public-health work, especially the antidiphtheria campaign and the relationship of the public-health organization, and that is a lively topic in every county society and in our State Society, and if something of that kind could be brought out at the next meeting I think it would be satisfactory to the New York State people.

Dr. Reik: At the Philadelphia meeting I tried to establish a definite form because we had been assembling rather informally before that. The original suggestion was that the Conference should consist of the president and secretary, editors, chairman of the legislative committees in the respective states, and the secretary of the State Board of Medical Examiners. We concluded that it would be wiser to leave off the Boards of Medical Examiners and confine the meetings to the officers mentioned. Dr. Albertson tells me that at the last meeting of the Pennsylvania State Society they took definite action upon this matter. The New Jersey Society accepted the original recommendation we had made. The list as provided in Pennsylvania included the president, the president-elect, the secretary, chairman of the Board of Trustees, the executive officer, and the editor. The Chairman of the Board of Trustees was substituted for the chairman of the legislative committee. I know that will be acceptable to New Jersey. Is it acceptable to New York?

Dr. Fisher: Quite, I am sure.

Dr. Morgan: I want to read a resolution adopted by the Philadelphia County Medical Society, copies of which will be mailed to each member personally:

Resolved, That it is the sense of the Philadelphia County Medical Society that Senate Bill No. 4085 and House Bill No. 11612 which aim to impose added restrictions upon physicians with regard to the carrying out of the provisions of the Harrison Narcotic Act of December 17, 1914, should be defeated.

The proposed bills do not allow any physician to defend himself if charge is made against him personally in the use of narcotic drugs or in his prescribing the narcotic drugs for other persons and would require new and burdensome record keeping without any additional safeguard in the carrying out of the Harrison Act.

The proposed Legislation would also permit persons without educational standing to act in judicial manner to pass judgment upon charges made against any physician and would not afford him right to notice and hearing before final action would be had in such case.

(Signed) Arthur C. Morgan, M.D.

This was adopted and has been sent to the county societies of the State. On page 171 of the *Bulletin of the American Medical Association* for October is an article by Woodward in relation to the proposed changes in the Harrison Narcotic Act. As this vitally and deeply affects all of us, it was the sense of the Philadelphia County Medical Society that this should be broadcast in every manner possible, so the members of the Conference here today will receive copies next week.

Dr. Lawrence: May I ask whether the Philadelphia Society has forwarded a copy to the Senators and Representatives from Pennsylvania?

Dr. Morgan: On page 176 of the same *Bulletin* referred to above is given a list of all the members of the Committees on Finance, United States Senate, Committee on Ways and Means, etc., to whom copies have already been sent.

Dr. Fisher: At the last executive committee meeting of our Society this very subject was brought up, and it was decided to draw up resolutions to present to our senators and representatives by the legislative committee, and we expect a report from that committee next week. I think it will be more or less broadcast through the State, and the request will go out to our several senators and representatives advising that negative action be taken on this bill.

In recent prosecutions in New York under the present Harrison Narcotic Act, we found that several physicians had been approached by Government officials and threatened with suits, but a settlement was offered by paying a fee of $50 *sub rosa.* That is not according to Hoyle, I believe, among practitioners, and we also have it under discussion. Has there been anything of the kind in Pennsylvania?

Dr. Morgan: The Philadelphia County Medical Society reported three concrete cases similar to that described by Dr. Fisher, and we are stopping the leaks at once.

Dr. Reik: I should like to report for the New Jersey State Society that every member of Congress and both United States Senators have received within the last week a letter as hot as I could make it about the opposition to the Harrison Narcotic Law. I also appealed to them to repeal the Sheppard-Towner Act, and I have response from most of them that they will give the matter consideration. The *Journal* for December also carries an appeal to every member of our Society to see or write to the representative of his individual district.

Dr. Lawrence: If it be not inconsistent with the object of this body, I think it would be a very worthwhile procedure for us to adopt some resolution which could be sent to the congressmen from the three states, indicating the unanimity of this feeling against advancement of the narcotic legislation. I feel that it is highly essential that we do everything we can and make every aggressive effort possible. It will not be sufficient for us simply to broadcast our opposition, because the people who have originated this legislation are centered at Washington and are going to use every effort to have it passed. They will not waste any breath in attacking us. They will spend all their time right on the congressmen. The state societies should make a point of knowing when those bills are coming up for a hearing in either House, and have delegations go to Washington to assist Mr. Woodward and see their respective congressmen and make them thoroughly understand that there is no debate about the matter at all, that the medical men are absolutely opposed to "putting teeth" into the Harrison Narcotic Law. The amendment is not only putting teeth into it, but bristles all over it.

The resolution read by Dr. Morgan was adopted.

THE MEDICAL SOCIETY

OF THE STATE OF PENNSYLVANIA

OFFICERS' DEPARTMENT

WALTER F. DONALDSON, M.D.
Secretary
8062 Jenkins Arcade Building
Pittsburgh, Pa.

SELF PROTECTION

Before laying aside the reminder that your 1927 county medical society dues are now due, we suggest that you immediately forward your check to the secretary of your county society, if for no reason than that to be found in our By-laws: "A member whose assessment is received after March 31st shall not be entitled to any benefit from the Medical Defense Fund from January 1st to the date of the receipt by the Secretary of the State Society of his name and assessment." This means that if the payment of your county society dues is delayed until after March 31st, you will not be entitled to the assistance of the Medical Defense Fund in the conduct of any suit for alleged malpractice which might at any time be brought against you by a patient who had been under your care from December 31, 1926, until the date of the payment of your 1927 dues.

ORIGIN OF DAMAGE SUITS

The attorney retained by the State Society to conduct the defense in one of our recently completed malpractice cases made the following statement in his final report: "It might be said that during cross-examination the plaintiff disclosed that it was consultation with Dr. Blank, after he had ceased to consult the defendant, which resulted in Dr. Blank's taking the plaintiff (the defendant's former patient) to an x-ray specialist, who later wrote the instructions to the plaintiff's attorney in preparation of his statement of claim." The case in question was one in which the plaintiff had a good functional result following fracture of tibia and fibula. The x-ray negative, however, as frequently happens, disclosed evidence of apparent faulty apposition, which, through the unethical, disloyal connivance of a fellow-physician, resulted in the institution of a suit for alleged malpractice against one of our members. The instance is cited as specific evidence that many suits for alleged malpractice have their origin in thoughtless or malicious remarks made by physicians to the patients or the friends of patients of other physicians.

A LOUD SPEAKER

As per his pledge, Dr. William J. Armstrong, of Butler, has paid $25 to our Society's Benevolence Fund. This is the second cash response to the full-page yellow insert appearing in the October, 1926, JOURNAL, bearing the suggestion that our members contribute or provide for legacies to our Benevolence Fund. To a similar insert published in the October, 1925, JOURNAL, one member responded.

If 7,500 of our members open their JOURNALS far enough to discover the insert and read its message, this response may be said to be discouraging. We believe, however, that if all our members had knowledge of the appeals presented from time to time to the Benevolence Committee, and knew the limitations of the assistance we are able to render to some of the approved applicants, or could read the expressions of appreciation received, the response to the yellow insert, which is distributed once each year to our more than 7,500 members, would be more generous.

It is true that the principal of the Benevolence Fund at present approximates $30,000, and that sixty-five cents from the five dollars State Society dues paid by each member will this year be added to the principal, nevertheless, it is obvious that the annual income (approximating $1,400) from the invested sum does not permit of very large remittances to our present beneficiaries, i. e., the widow of a former member, with five dependent children; two members, helpless because of incurable disease; and two

members too old to be longer self-supporting. The demands on the earnings of the Fund vary from time to time, and the amount of money which we are able to pay to beneficiaries fluctuates with the number among whom the available cash must be divided. It was not intended that benefits from the Fund should ever take the place of support due from relatives; nor was it intended that they should be the sole source of support of any beneficiary; but rather that they should parallel assistance received from other sources.

Voluntary contributions, large or small in amount, will help to swell the total of the Fund to the point where the income from it will make it possible to meet adequately all the approved requests for assistance. Our investigation of applicants is conducted so considerately, and our payments made so quietly, that it is possible for only the members of the Benevolence Committee, four in number, to be acquainted with the situation. We feel sure that our members would not have this phase of the service handled in any other manner.

The members of the Benevolence Committee trust that confidence may be expressed by voluntary contributions which will rapidly increase the Benevolence Fund. Pledges and payments on same may be forwarded at any time to the Secretary of the Society, and will be acknowledged in the columns of the ATLANTIC MEDICAL JOURNAL.

ARE WE PROGRESSING?

We are! The percentage of 1927 dues received at this office January 20th from certain county medical societies is herewith indicated: Clarion—100%; Juniata—100%; Wyoming—100%; Greene—92%; Union—92%; Elk—87%; Monroe—78%; Montgomery—70%; Franklin—66%; Columbia—63%; Delaware—61%; Montour—60%; Berks—54%; York—53%; Cumberland—52%; Mercer—51%; Bucks—50%; Mifflin—50%.

On the same date last year, nine county societies had paid the current year's dues of at least 50 per cent of their members. It will be noted that the names of seventeen societies appear above. Six of the nine societies appearing on last year's list show a larger percentage this year. Twenty-four county societies have paid the 1927 State Society dues for less than 50 per cent of their members, while twenty-one societies have not remitted for any of their members.

Secretary Ross of the Clarion County Medical Society, having collected and remitted the 1927 dues for all his members, complacently announces that he and Mrs. Ross are sailing January 27th on a five-months' journey around the world.

GENUINE SERVICE

The Wheeling (W. Va.) *Intelligencer* of January 10th carried a half-page advertisement headed:

IS YOUR CHILD SAFE? IS IT IMMUNE FROM DIPHTHERIA?

More Than 11,000 School Children Have Been Immunized in Ohio County. All Children of Preschool Age Should be Because They are More Susceptible to Disease Than the Older Ones.

HAVE YOUR CHILD IMMUNIZED NOW BY YOUR PHYSICIAN OR BRING YOUR CHILD TO THE CITY-COUNTY HEALTH DEPARTMENT

Similar advertisements appeared in this up-to-date city daily newspaper for a number of days, the space being donated by the paper "in the interest of public health." We feature it as concrete evidence of memorable coöperation between the press and public-health authorities. This contribution by the *Intelligencer* will, we trust, be emulated by many Pennsylvania newspapers when our Society adopts and puts in force the plans to be recommended by the Committee on Lay Education, of which Dr. Frank C. Hammond is chairman. In the meantime, we trust that our members are zealously presenting to their clientele the epoch-making, death-staying powers of toxin-antitoxin in permanent immunization against diphtheria.

CHANGES IN MEMBERSHIP OF COUNTY SOCIETIES

The following changes have been reported to January 20th:

ADAMS: *Death*—Ivy F. MacNair, Littlestown (Atlantic Med. Coll., Baltimore, '09), January 6, aged 55.

ALLEGHENY: *New Members*—Albert A. Hudacek, 854 Braddock Ave., Braddock; Archie M. Richardson, Lock and Fourth Sts., Tarentum; Gomer S. Llewellyn, Mayview; Arthur K. Lewis, 333 E. 8th St., Homestead; John L. Marshall, 131 First St., Aspinwall; Herman A. Blackwood, 595 Butler St., Etna; Robert T. Hodgson, Jr., Smith & Wood, Wilkinsburg; Robert E. Gardner, Woodville; Oscar J. Eichhorn, 32 E. Main St., Harry A. Klee, 225 E. Main St., Carnegie; S. D. Evans, 247 Charles St.; Norman H. Hartman, 540 Brownsville Road; Harry R. Dapper, 18 Clifton Blvd., Carrick; Michael Depta, Jenkins Arcade; Thomas L. Cottom, Diamond Bank Bldg.; Harry Epstein, 3700 Forbes St.; Elizabeth Ross, 420 Neville St.; Galen M. Hover, University of Pittsburgh School of Medicine; Kevin T. Reeves, Mercy Hospital; Louis Bernstein, 1005 Wylie Ave.; Edward Lebovitz, 1227 Wylie Ave.; P. J. McFadden, 3013 Bergman St.; William H. Wolf, Jenkins Arcade, Pittsburgh. *Resignations*—I. Williams, Harry F. Miksch, Pittsburgh; Victor King, Coburg, Ontario, Canada; Henry M. Snitzer, Steubenville, Ohio. *Deaths*—William McCracken, New York

(Homcopathic Med. Coll., '91), December 18, aged 60; Robert S. Donehoo, Pittsburgh (Univ. of Pgh., '93), December 24, aged 58.

BERKS: *Resignations*—LeRoy J. Wenger, 312 N. Clifton Ave., Sharon Hill; James E. Landis (removed out of town).

CAMBRIA: *New Member*—Francis P. Dostal, 333 Green St., Conemaugh. *Transfer*—S. Clarence Brumbaugh, Windber, from Bedford County Society.

CARBON: *Death*—Charles E. Bingaman, Palmerton (Jeff. Med. Coll., '10), November, 1926, aged 43.

CLARION: *Death*—Albert J. Hepler, New Bethlehem (Jeff. Med. Coll., '86), recently, aged 69.

COLUMBIA: *Reinstated Member*—Roland F. Wear, Berwick.

CUMBERLAND: *New Member*—Joseph L. Dougherty, Mechanicsburg.

DAUPHIN: *New Member*—Donald B. Stouffer, 53 S. Second St., Steelton.

FAYETTE: *Removal*—Hugh J. Coll from Connellsville to Florida Theater Bldg., St. Petersburg, Fla.

GREENE: *Removal*—Samuel H. Iams from Waynesburg, to Princeton, N. J.; George W. Teagarden from Wind Ridge to Chambersburg.

INDIANA: *Removal*—Malcolm M. Raymond from Lansdowne to 101 Miller Ave., Homer City.

LANCASTER: *New Members*—Mary R. Bowman, Mt. Joy; David C. Stoner, 72 E. Main St., Mt. Joy; Meade D. Schaffner, 647 W. Orange St., Lancaster; John L. Winters, Blue Ball.

LYCOMING: *New Member*—Charles H. Youngman, 11 W. 4th St., Williamsport. *Removal*—James S. Mosher from Liberty to Williamsport.

MERCER: *New Member*—Myron Asher Bailey, Jamestown. *Deaths*—Salem Heilman, Sharon (Jeff. Med. Coll., '71), December 15, aged 79; Orlando A. Jones, Sharon (Coll. Phys. & Surg., Balt., '86), December 16, aged 63.

MONTGOMERY: *New Members*—Sarah E. Maute, Norristown; William S. Colgan, Bridgeport.

NORTHAMPTON: *New Members*—Clifton C. Daigle, 42 N. Third St., Easton; Norberth Crawford, Robinson Ave., Pen Argyl. *Death*—Benjamin F. Dilliard, East Bangor (Coll. Phys. & Surg., Baltimore, '81) recently, aged 69.

PERRY: *New Member*—Catherine Johnston, New Bloomfield.

PHILADELPHIA: *New Member*—Daniel E. F. Holloway, 8417 Tinicum Ave., Philadelphia. *Reinstated Member*—Julius Schneyer, 1831 Spruce St., Philadelphia. *Resignation*—Randolph Faries, Philadelphia. *Removal*—George W. Wagoner, from Philadelphia to 5 Polo Road, Bryn Mawr (Montg. Co.). *Deaths*—George G. Clark, Philadelphia (New York Univ. Med. Coll., '80), December 12, aged 74; John C. Appelgate, Philadelphia (Jeff. Med. Coll., '87), December 20; Frank W. Gulick, Philadelphia (Jeff. Med. Coll., '93), December 18, aged 62; William M. Sweet, Philadelphia (Jeff. Med. Coll., '86), December 24, aged 67; Joseph H. Ross, Philadelphia (Jeff. Med. Coll., '94), January 10, aged 52.

SUSQUEHANNA: *New Member*—J. P. Coll, Susquehanna.

VENANGO: *Reinstated Member*—Frank M. McClelland, Franklin.

PAYMENT OF PER-CAPITA ASSESSMENT

The following payment of per-capita assessment has been received since December 14th. Figures in the first column indicate county society numbers; second column, State Society numbers.

For 1926				
Dec. 20	Venango	55	7583	$5.00
	Columbia	37	7584	5.00
Jan. 17	Philadelphia	2084-2085	7585-7586	7.50
For 1927				
Dec. 15	Luzerne	4	100	$5.00
17	Lycoming	1	101	5.00
	Columbia	1-11	102-112	55.00
20	Montgomery	22-56	113-147	175.00
	Bucks	2-31	148-177	150.00
	Wyoming	7	178	5.00
24	Greene	1-26	179-204	130.00
	Erie	9-15	205-211	35.00
	Montour	2-10	212-220	45.00
	Huntingdon	2-4	221-223	15.00
	Montour	11	224	5.00
27	Elk	11-18	225-232	40.00
	Clarion	1-14	233-246	70.00
	Lehigh	1-8	247-254	40.00
	Luzerne	5	255	5.00
28	Lancaster	4-7	256-259	20.00
29	Venango	1	260	5.00
	Bradford	1-8	261-268	40.00
	Clinton	1-7	269-275	35.00
31	Montgomery	57-76	276-295	100.00
Jan. 3	Northampton	1-13	296-308	65.00
	Washington	2-20	309-327	95.00
	Montour	12	328	5.00
	Elk	19	329	5.00
5	Franklin	4-7	330-333	20.00
	Mercer	1	334	5.00
	Schuylkill	21-40	335-354	100.00
	Somerset	1-8	355-362	40.00
	Erie	16-18	363-365	15.00
	Mercer	7-9	366-368	15.00
7	York	1-44	369-412	220.00
	Dauphin	3-41	413-451	195.00
	Juniata	1-9	452-460	45.00
	Union	1-10	461-470	50.00
	Mercer	2-6, 10-19	471-485	75.00
	Clinton	8-9	486-487	10.00
	Venango	2	488	5.00
	Mifflin	8-12	489-493	25.00
10	Franklin	8-22	494-508	75.00
	Montour	13-15	509-511	15.00
	Mercer	20-21	512-513	10.00
	Schuylkill	41-60	514-533	100.00
	Adams	6-12	534-540	35.00
	Venango	3	541	5.00
	Allegheny	1-77	542-618	385.00
	Dauphin	42	619	5.00
13	Montgomery	77-96	620-639	100.00
	Mercer	22	640	5.00
	Clarion	15-16	641-642	10.00
	Susquehanna	1	643	5.00
	Northumberland	1-6	644-649	30.00
17	Luzerne	6-31	650-675	130.00
	Cumberland	1-16	676-691	80.00
	Elk	20	692	5.00
	Mercer	23-27	693-697	25.00
	York	45-66	698-719	110.00
	Columbia	11-22	720-731	60.00
	Huntingdon	5	732	5.00
	Cambria	1-37	733-769	185.00
	Union	11-12	770-771	10.00
	Clarion	17-26	772-781	50.00
	Mercer	28-30	782-784	15.00
	Lehigh	9-16	785-792	40.00
	Montgomery	97-106	793-802	50.00
	Mifflin	13	803	5.00
	Somerset	9-10	804-805	10.00
	Dauphin	43-79	806-842	185.00
18	Lycoming	2-12, 14-50	843-890	240.00
	Wyoming	8	891	5.00
	Mercer	31	892	5.00
	Berks	2-71	893-962	350.00

RESERVATIONS FOR THE PITTSBURGH SESSION

Must be made through the Committee on Hotels, Dr. I. Hope Alexander, Jenkins Building, Pittsburgh, Pa., owing to the limited number of rooms available at the Hotel Schenley.

COMMISSION ON COMPENSATION LAWS

Lever F. Stewart, *Chairman*
Clearfield, Pa.

THE PENNSYLVANIA PHYSICIAN CONSIDERS ALL SIDES OF THE STATE COMPENSATION LAW

The Medical Society of the State of Pennsylvania is extremely fortunate in having an exceptionally well-balanced, capable, keen, and energetic Special Legislative Committee. For more than two years the Compensation Commission tried in every way to press for a court decision testing the so-called Mackey decision concerning the right of physicians to charge for services given to compensation cases in hospital wards. Immediately following the adoption of the Commission's recommendations by the last session of the State Society, the Society's Special Legislative Committee arranged a conference covering the Commission's work, and had already secured the service of Mr. Harry Mackey, formerly chairman of the Compensation Board, to represent the Society in this work. Obviously Mr. Mackey's experience as a former administrator of the Compensation Law has made him more familiar with our present Compensation Law than any one in the State. The Mackey decision is based on the present Compensation Law as it stands. Briefly, the Society undertakes to bring about certain changes in the Compensation Law that will permit of no dispute about charging for hospital service to these patients, that will give the physician a standing at law, that will give the injured man the benefit of care and attention throughout whatever period such care and attention may be needed. In coöperation with the State Hospital Association, similar provision is sought for the hospitals of the State.

Discounting the shortcomings of the medical profession in the making of necessary reports, the physician seeks a change that protects the insurance company in this respect. As a result of special knowledge in possession of physicians, further changes are sought protecting insurance companies against charges by resident physicians, and an effort is made to define the relation of resident physicians and the hospital in so far as the making of charges is concerned. The physician concedes the right of the insurance carrier to select his own physician, as a principle without which the Compensation Law could not properly operate. The physician strongly recommends provision whereby autopsies may be made when the cause of death is in dispute. That information may be given freely they ask protection of the tribunal administering the Compensation Law in the many instances where privileged information is divulged.

Inasmuch as the administration of the Compensation Law deals solely with problems of law and medicine, the physicians of the State feel that medicine should be represented on the Compensation Board by a doctor of medicine. The Society confidently asserts that such a change will result in many short cuts to fair decisions concerning medical problems.

The State Society recommends to our present session of the Legislature the establishing of a State University of Reëducation. The purpose of such a school would be the taking of the human cripple, waste product of Pennsylvania's industry, in whom all opportunities for surgical rehabilitation had been resorted to, and provide him with education in trades, etc., that might enable him to resume a gainful occupation. Such a university could be established in conjunction with one of the state universities already receiving State aid. To the thinking physician there is little distinction between taxes levied for continuing laborers in gainful pursuits and taxes levied for the maintenance of almshouses, asylums, and prisons, so far as expense is concerned; but so far as human interest and obligation is concerned, there is no comparison. The establishing of such a university is mandatory. The business principle of salvaging industry's most precious waste product is the compelling reason. With this recommendation of a humanitarian and practical institution the State Society rests.

The passage of years has brought about considerable change in hospital management. To those whose recollection extends back even ten or fifteen years, it will be quite easy to recall the lack of effort on the part of all hospitals to collect the usual per-diem charge for ward patients. Today the high cost of maintenance and the corresponding increase of wages to the laborer has made hospital managers more zealous in efforts to collect from all patients. These circumstances have made it less easy for the injured man to remain in a hospital indefinitely. They have made it less easy for the injured man, who at a later date would need secondary reconstructive surgery, to reënter the hospital for such surgery. The mere methods of aggressive collection in practice in most hospitals are sufficient to discourage the ignorant pauper who needs further hospital care. It is common knowledge that assistants and associates chosen from the younger men complement the service of each surgical chief. It is common knowledge that such assistants and associates gain their knowl-

edge and experience from the instruction of and the work given by the chiefs of service. Where the administration of our Compensation Law abruptly terminates the compensation of the surgeon or where it denies him any right whatsoever to compensation, it is most natural for a chief of service to assign these compensation cases to assistants. Curiously enough, in spite of the great economic importance of industrial surgery, but few surgeons take an interest in this difficult work. Unquestionably the successful treatment of these cases, notably fractures, requires infinitely more skill than the successful treatment of abdominal lesions.

Provision for further payment to the hospital and provision for adequate compensation to the doctor during the period that an injured man requires medical and hospital care will secure better care and quicker return of the injured man to his work as a result of it. It is obvious that the surgeon heading a service will take a personal interest in the injured man for whose care he is employed and is told he will be paid. Here a contract is understood and accepted; where, under the present scheme of things, the chief of the surgical service is invariably filled with resentment for the present interpretation of our Compensation Law. Although so intimately connected with the operation of the Compensation Law, the physician has not been consulted concerning its provisions. The lawyer, a decidedly less important factor in the operation of the law, is well provided for. Provision is made for him to present his bill for service to the Board for approval.

Communities establish hospitals and court houses. To the court houses the lawyers go to prosecute or defend the members of the community. For this they are paid. To the hospitals the physicians go to practice the healing art regardless of whether they are paid. They have never refused to give help to the suffering, personally or through assistants. Should they be penalized on account of a reputation for humane behavior?

Unbiased study of the amendments proposed by the State Medical Society will convince any one of the effort on the part of the physicians of Pennsylvania to bring about a change in conditions that will be helpful to all—especially the injured man. In conceiving these amendments, the physicians have attempted to have the law exact better performance from them than they have given in the past. They, learned in medicine, have tried to point the way that more truth may be brought out, and they have tried to correct their own carelessness in making reports as well as foresee complications arising from calling of physicians in emergencies.

County Society Reports

BERKS—JANUARY

At the meeting of the Society on January 11th, Dr. Thomas McCrae, of Philadelphia, delivered an address on "Colitis." Dr. McCrae discussed the methods of examination and the diagnosis of the various forms. The importance of a careful study of the stools and of the inspection of the mucous membrane through the sigmoidoscope was emphasized. The significance given by some to the results of cultures, except in the case of the dysentery bacillus, was brought out, and the need of more exact information on this subject was detailed. Particular attention was given to mucous colitis, and emphasis laid on the importance of regarding it as secondary to general disturbance of the nervous system. In treatment, it was suggested that the condition should be fully explained to the patient so that coöperation could be obtained. It was also suggested that local treatment be kept to a minimum, both to avoid too much attention being kept on the bowel, and to lessen the chance of increasing irritation.

Under catarrhal colitis, attention was given to the causes and the importance of correcting them, especially the wrong use of purgatives and irrigations. The influence of disturbance in the colon in causing gastric symptoms was discussed; in such cases the disease in the colon may be unrecognized. With regard to ulcerative colitis, attention was drawn to the need of excluding infection with the dysentery bacillus or amebæ. Dr. McCrae did not agree with the estimates sometimes made of the frequency of amebic infection, although agreeing that undoubtedly there are a certain number of unrecognized mild cases which are responsible for intestinal disturbance.

This paper was discussed by Drs. Shoemaker, Funk, and Livingood, the latter saying that by the x-ray mucous colitis can be outlined, and the function of the colon shown by following the passage of the barium through it.

About 110 members attended the annual banquet.

CLARA S. KEISER, M.D., *Reporter.*

ERIE—JANUARY

At the meeting on January 5th, Dr. Frank P. McCarthy, the retiring president, read a paper on the progress of medicine in general and some special lines in particular. Speaking of iodin in the preparation of the goiter patient for operation, he stated that the use of Lugol's solution has supplanted ligation in not a few goiter clinics. In two cases of appendiceal abscess with marked toxic-goiter symptoms, the symptoms completely disappeared after the operative recovery. This was explained by the absorption of altered proteins from the wound.

In diagnosing appendicitis there are many pitfalls. Cystoscopy and pyelography have cleared up the cause of many right-sided pains heretofore diagnosed and operated upon as appendicitis.

The Streptococcus scarlatinæ comprises a group of microörganisms causing scarlet fever, the toxin and antitoxin from which are now used with decided success. This antitoxin has proved its worth, and a good preparation given early and in sufficient dosage produces an improvement which is little short of miraculous.

We give tetanus antitoxin in accident cases routinely at both hospitals.

Measles has inspired no concern among the laity until it was compounded into measles-pneumonia or measles-mastoiditis; then it developed its own brand of con-

cern, and in sequence came the prophylaxis by injections of convalescent serum. A complete passive immunity can be produced by such injections, lasting less than six months. If given after the fifth and before the eighth day following exposure it will not prevent, but will modify the disease.

Prevention will eliminate tuberculosis. Pernicious anemia seems to be yielding to the new dietary treatment. Mercurochrome has given brilliant results in blood-stream infections.

Dr. William J. Mayo, at the State Society meeting held in Harrisburg in 1925, visioned medicine as in the ultramicroscopic and twilight zone, and predicted great prolongation of the span of human life through ultramicroscopic and biochemic agencies. What we have seen in our span of years will pale into insignificance when compared with what the future has to offer for medicine.

ANNA M. SCHRADE, M.D., Reporter.

LUZERNE—DECEMBER

The regular meeting was held December 15th, in the Society Building, with President P. P. Mayock in the chair. The following officers were elected for 1927: President, G. R. Drake; vice-president, M. B. Ahlborn; recording secretary, J. J. McHugh; treasurer, Boyd Dodson; director for three years, N. Ross; for one year, H. A. Fischer; censor for three years, W. F. Danzer; librarian, L. H. Taylor; editor and reporter, L. T. Buckman. A resolution was passed requesting each community in the county to pass an ordinance requiring that all dogs be inoculated against rabies.

Tuberculosis from the Viewpoint of the General Practitioner: Dr. W. P. Brown, President of the Pennsylvania Tuberculosis Association.—The death rate in tuberculosis has been cut one-sixth since 1870. Between 16 and 44 years of age no other cause of death is so common. In the diagnosis, do not wait for the identification of the bacteria. Pleurisy with effusion, recurrent colds and laryngitis, and ischiorectal abscess all suggest tuberculosis. An important factor in control is the virulent carrier, and among these, cigar-factory workers take an important place. Many go about their daily work with active lesions, but without clinical symptoms.

No case is typical. Patients may show only one of many symptoms—loss of appetite, fatigue, night sweats, gastric distress or fever in the evening. Doctors are loth to tell members of the family after a diagnosis has been made. A city such as this will show about 3,000 cases, so all cannot be cared for in a hospital. The home treatment consists largely of rest. The patient should be in bed as long as he runs one degree of fever, in a room by himself, and vary between the bed and the reclining chair. He should have separate dishes from the rest of the family. He should rest until the signs and symptoms are under control. In afebrile cases the patient can go for a stroll at 8:30, but should go to bed again at 9:30 for two hours. A stroll may be taken again at 1:30, but the patient should be in bed again at 3:30. After supper the program should include a restful recreation at home, such as radio.

The best food is a generous mixed diet that agrees with the patient. Fresh air used to be considered the prime thing, but simply an interchange of air is sufficient. It is not necessary to be out in the wintry air, which rather is harmful. Sun rays are good in extrapulmonary conditions. Tuberculosis is a general affection with local manifestations. District nurses are of great help, and should see the patient once a week.

As a public-health problem, the reporting of cases is important. This is a disease that attacks patients who are important in the scale of life. It attacks the upper class as well as the lower. They want attention, and will not be satisfied with occasional visits by a doctor to the usual sanatorium. Therefore, county hospitals are valuable.

In the medical treatment, antipyretics are indicated for fever, atropin at bedtime for night sweats, and rest for pleurisy. The only good hemorrhage is the one that awakens the patient to the importance of the involvement in the lungs. Give morphin with the patient flat in bed on a pillow, and do not allow the head to be raised to expectorate. Use an ice cap on the head. For cough, give codein cough mixtures. The rest cure is the thing that stops the cough. A cough is as bad as running around the block. Even in the movies at the sanatoria there is less coughing than one sees in an ordinary crowd at the movies in the average city.

Statistics from surveys in certain counties of the State, if compared with the population of Luzerne County, would indicate 1,000 active cases in this county and 2,800 active and quiescent cases altogether. That is, there are four cases to every one of the 208 practitioners.

Dr. Alexander Armstrong.—Dr. Brown represents the Pennsylvania Society for the Prevention of Tuberculosis, probably the original society in this country for this purpose, but not antique for that reason. The plan is to go from section to section, especially in rural communities, and have clinics and demonstrations, accompanied by the health car so that laboratory work can be done. This work finds cases which elude the general practitioner. Such cases go along until some big thing happens, like a hemorrhage.

Luzerne County has been trying to plan a hospital for the county for five years. While we have an institution already built within the county, why not take care of the patients there from your own county first? For instance, at White Haven I would start a waiting list and accommodate patients from this county first before taking others from outside the State. At a recent conference it was agreed that we now have enough beds for our patients, but the thing is to work up an adequate home and follow-up treatment. There is one criticism of the State management of the tuberculosis case: they claim to have a waiting list, but they do not take into account that they take the children of the pretuberculous class to the extent of six hundred. Would it not be better to take the active cases, disseminating the disease at home, and check the disease at home, rather than take the children?

Dr. W. J. Davis.—We have tuberculosis among us and it is not recognized. The physician should use a little more courage in looking for tuberculosis and calling it tuberculosis. Do not put it off as a "cold." Up to December 1st, Wilkes-Barre had 86 deaths from tuberculosis; i.e., there are 9 active cases for every death that occurs. The probable death rate in Luzerne County is 300. In 1923 there were 162 deaths and 1,196 positive cases found. Many children have glandular and hilum lesions not recognized. The infection takes place in the child and I am pleading for recognition in the child.

Dr. S. D. Wyckoff.—Tuberculosis begins with the children. The hope of curing a case lies in proving it. Some patients overdo the fresh-air and exercise game, and walk themselves to death. The patient must understand what is meant by the physician's orders and directions. Rest is astonishing in its curative effect. In regard to unrecognized cases in general practice: a

patient had pleurisy with effusion several years ago, went without special warning, and she developed an advanced case. If she had had suitable warning, she would not have had this trouble. Two physicians advised her to have sweats, having diagnosed kidney trouble. Another physician advised walks. Her trouble had not been diagnosed.

In another case a young girl broke herself down nursing mother and father. One doctor said he did not need to examine the sputum. Another said he needed an x-ray examination, but she could not go to the x-ray laboratory. One doctor told her she was so sensitive she could not stand the air. Another doctor came in, talked to her for ten minutes, looked at her tongue, and went out without making a diagnosis. These are typical cases. The trouble is that the doctor does not take time to make the proper examination and diagnosis.

LEWIS T. BUCKMAN, M.D., *Reporter.*

LYCOMING—JANUARY

The annual meeting of the Society was held at the Park Hotel, Williamsport, January 14th. The afternoon program was devoted to scientific papers and the installation of the following officers for 1927: President, John B. Nutt, Williamsport; first vice-president, P. Harold Decker, Williamsport; second vice-president, J. Frank Gordner, Montgomery; secretary, Walter S. Brenholtz, Williamsport; treasurer, John A. Campbell, Williamsport; reporter, W. Eugene Delaney, Jr., Williamsport; librarian, Wesley F. Kunkle, Williamsport; censor, George C. Davis, Milton; trustees, George L. Schneider, and William E. Delaney, both of Williamsport.

Dr. Judson Daland, Philadelphia, made an address on "Focal Infection from the Standpoint of the Internist." Dr. William E. Lower, of the Crile Clinic, Cleveland, discussed "The Differential Diagnosis of Certain Lesions of the Urinary Tract," illustrated with lantern slides. Dr. A. C. Morgan, president-elect of the State Medical Society, discussed the Workmen's Compensation Act and the new Medical Practice Act, urging the members of the Society to do all in their power to bring about the proper legislation affecting the medical profession.

The 78th annual banquet was held at 7 p. m., at the Park Hotel. Dr. D. M. Niple, of Turbotville, acted as toastmaster. The following responded to toasts: Drs. A. C. Morgan; Judson Daland; William E. Lower; George Davis, of Milton, the retiring president; and John B. Nutt, president-elect of the County Society.

W. EUGENE DELANEY, JR., M.D., Reporter.

MERCER—NOVEMBER-DECEMBER

The annual banquet of this Society was held on Wednesday evening, November 17, at the Penn-Grove Hotel, Grove City. There were eighty present. After the dinner, Dr. Thos. M. McMillan, of Philadelphia, Secretary of the Pennsylvania Heart Association, read an interesting paper on "Rheumatic Fever in Relation to the Heart." The speaker emphasized the necessity of rest in bed over a long period in cases of rheumatic fever. When the patient had recovered sufficiently, he urged that all possible foci of infection be removed.

Dr. William D. Stroud, of Philadelphia, read a very interesting paper on "Myocardial Reserve," abstract of which follows:

The great importance to the medical profession of the nation-wide attempt to prevent and relieve cardiovascular disease, which disease stands at the top of the medical problems of the day, was stressed. The present plan of attack is beginning along the lines of the prevention and relief of tuberculosis for the past twenty-five years, and it must be attacked in much the same manner, by keeping the profession alive to the various advances in medicine and to new methods of prevention and relief of cardiovascular disease, as well as educating the public.

The idea of the all-important valvular disease has been replaced by a realization that prognosis and treatment in cardiovascular disease rests, almost entirely, upon an estimation of the myocardial reserve.

We must realize that although this estimation is a very difficult matter, yet the more it is attempted the more accurately will it be made. The past idea of estimating the myocardial reserve by the presence of so-called "weak heart sounds," low blood pressure, valvular murmurs, etc., must be replaced by taking of more careful histories, both as to the infections and subjective symptoms, by a thorough physical examination of the heart, emphasizing inspection, palpation, and percussion, which have been almost ignored because of the importance placed on auscultation, by an estimation of the size of the heart, and in addition to these clinical findings, by fluoroscopic and electrocardiographic studies.

The newer conception of heart disease is a much more hopeful one, as with the modern attempt at conservation of the cardiovascular reserve and vocational guidance and bureaus for the handicapped we are offering to those with damaged hearts a greater hope for many years of a happy and useful life than ever before.

On December 9, Dr. M. E. Cowen, of the Cresson Sanatorium, gave a lecture on tuberculosis at the meeting of the Society at the Court House, Mercer. The public was invited, and many health workers were present. At the end of the lecture motion pictures were shown of the children at Cresson. These were most interesting and visualized the splendid work that our Commonwealth is doing for its tuberculous children.

PHILADELPHIA
December 22, 1926

Dr. B. Alexander Randall: The Cure of Suppurating Ears.—Many busy practitioners have on their lists cases of long-standing ear discharge which is foul, at times painful, and usually impairs the hearing, with grave danger of serious developments. These cases are trying, and are rejected by insurance companies as poor risks. Ear cases constitute from two to five per cent of the work of a general practitioner or of a general hospital. Nearly half of them are chronic—a fact which reflects upon the general practitioner more than upon the obstinacy of the infection. The patient and the physician both need better to realize the seriousness of the problem, which presents one adult in three deaf in one or both ears. It is necessary to teach the nurse or parent the proper method of syringing the ears, using water at 108 to 115 degrees, followed by gentle mopping with sterile cotton under a good light, the application of a protective and stimulating salve (hydrarg. oxid. flav.) to any excoriated surfaces, and the insertion of a wick saturated with 5 per cent glycerate of zinc sulphate. Powders are useful *if* they do not cake or clog the exit of discharge. As iodin is probably specific for the not infrequent tuberculous infection, a wick of iodoform gauze may well be used to protect the depths of the ear. Tight packing, even with boric powder, is to be deprecated if not condemned, and ear drops

are rarely to be ordered for home use, even when the patients are well instructed in their employment.

When good cleansing efforts fail, it is usually because of nature's perverted effort to cure by engrafting epiderm from the drumhead upon the intratympanic surfaces, forming laminated masses of desquamated cells. These cavities are normally lined with a mucosa whose ciliated cells sweep detritus down the eustachian tubes. If this lining is lost and replaced by nonciliated cells, the dead epiderm tends to collect. The exceptions are not numerous to a law stated by the writer some thirty-five years ago: "All chronic otorrheas are due to cholesteatomata." Since no normal means are present to remove them, nature tries to wash them out with secretion and push them out by granulation growth, so that even with no reinfection, for which germs are abundantly present, there are likely to be recurrences. Apparent cure must long be regarded as a mere truce. Periodic clearing away of skin flakes is the only recourse for continued relief from relapse, though many "cures" have been exploited and exploded *seriatim,* to be endlessly revived.

Mastoid operations, partial and radical, have been done by the thousands, but half of them remain dry for only two years, and the method is not always safe. The younger colleague who inclines to scoff at the older men has generally become a sadder and a wiser man as the years bring to his notice his actual ultimate results. In the large city clinics, where clientele changes rapidly, roseate prospects are not apt to be followed to their fading. Colleagues have sometimes tabulated by scores or hundreds their successful cases, but the initials, dates, and ages enable others to identify many a patient who has later gone elsewhere, little, if at all, benefited by the alleged cure.

What, then, is to be done for these chronic otorrheas? "Clean them!" is the laconic answer which so often involves Spartan treatment. Few of the radically operated cases can be discharged as apparently cured in less than six weeks of almost daily treatment; while a like course of conservative but thorough treatment can often accomplish a surer dry result, with preservation of better hearing. The syringe, forceps, and probe, and especially the little attic curet of Blake can bring out the collected flakes of cholesteatomata, extracting the bottom bricks of the pile to let others fall into visible and removable position; and after an often astonishing amount of debris has been removed, we may look for the need of but a spring and fall house cleaning to maintain good condition.

The fight to obtain normal hearing, however, may need to be much prolonged, for though we find the percipient apparatus intact in 90 per cent, we must turn our attention to the frequent impairments in the conducting mechanism. Obstructions of the external canal, half of which are mere wax plugs which yield easily to good syringing, must be removed. For the larger remainder, with a stiffened chain of ossicles, much can be done by rational massage, either with the palms of the hands, the finger tips, or with a cotton-tipped probe containing yellow-oxid-of-mercury salve.

Whether or not a perforation of the drumhead impairs function can usually be determined by placing a patch of paper over it to test the effect of its closure, and to stimulate healing activity of the margins. Since the main function of the drumhead is to protect and keep moist and supple the conducting structures within, it is very desirable that it should heal, except in a few cases where it is only through such an opening that the sound can enter. The paper patch must not be prematurely tried, since it may overstimulate and reawaken discharge. Treatment by boric acid has been condemned as too drying, seemingly enlarging the opening and preventing its normal tendency to heal. Certainly a glycerin-moistened flake of cotton, snugly applied, can better meet the needs of the future as well as the present. A healed drumhead distinctly lessens the vulnerability of the ear from the nose and throat within, as well as from external irritants.

Dr. Ralph Butler: The Present Status of the Paranasal Sinuses and Tonsils as Foci of Infection.—Many changes have occurred in the past decade which prove the old teachings faulty. We have become more radical than formerly, as there seems to be more risk in waiting. Daland states that most foci of infection are in the cavities of the head, and that latent tonsillitis is very common in adults, causing subacute arthritis, myocarditis, cholecystitis, nephritis, pyelonephritis, ulcer, and appendicitis. These give a history of repeated tonsillitis in adolescence. Retrobulbar neuritis is the result of sphenoid infection in 2 per cent, the teeth in 10 per cent, and the tonsils in 20 per cent.

What are the results from tonsillectomy and treatment of sinuses? Ears and mouth breathing are nearly always benefited. Of systemic conditions, the heart, kidneys, rheumatism, and arthritis are in the majority improved. It is the successful treatment for 90 per cent of colds. If a cervical adenitis does not subside following tonsillectomy, tuberculosis must be suspected. Tonsillectomy should always be done in sufferers from frequent tonsillitis or quinsy, but whether or not all hypertrophied tonsils containing cheesy matter should be removed is a question. Probably, in these instances, the patient has acquired an immunity to the infective material. There will probably ensue a flare-up of a secondary inflammation following removal of the focus, but this will be the last attack. A neurotic patient may be made worse by operation, and there is greater risk at the extremes of life. Vaccines may be helpful to prevent or cure infection. Hygienic and dietetic problems may be involved. Preventive medicine must be practiced.

Dr. Francis Heed Adler: Ocular Disorders in Deficiency Diseases.—Beriberi, scurvy, and certain diseases with eye symptoms primarily, fall under the heading of deficiency diseases. Xerophthalmia or keratomalacia is produced by a diet lacking in fat-soluble vitamin A, and is readily cured by adding butter fat or cod-liver oil to the diet. It may occur, also, in individuals who have had a diet containing vitamin A, but through some intestinal disorder, are unable to assimilate it. Clinically, the disease occurs most frequently in children during the period of most rapid growth when the diet is poor or lacking in vitamin A. Some children are immune, as was proved by five children who were kept on a special diet lacking vitamin A, but who did not contract xerophthalmia.

Pathologically, are the eye changes due to the deficient diet, or does the diet so reduce the vitality that a secondary infection occurs? There is evidence that they are primarily due to the diet, for the disease could not be transmitted in rats by drawing a thread through an affected eye, then through a normal eye, nor by bacterial inoculation.

Dr. Samuel A. Loewenberg: Focal Infection of Pulmonary Origin.—We seldom think of the lungs as a focus of infection, but there is a theory that during early childhood tubercle bacilli enter the body, go to the lower lung, thence after a bronchopneumonia to the lymph nodes, and at puberty develop pulmonary tuberculosis. The focus may remain in the lung for an indefinite period. The lungs must be considered as a

possible focus of infection in certain adolescent phobias, headaches, palpitation, and indigestion—symptoms due to the sympathetic nervous system. Possibly such foci are responsible for early dementia præcox. Especially in incipient tuberculosis, before diagnosis is possible by x-ray or examination, indigestion, headache, and fatigue (symptoms of the sympathetic nervous system) are indicative of poisons harbored in the lungs. A large number of bronchial-asthma cases show no response to the sensitization tests, and no focus is demonstrable in teeth or tonsils. Sinusitis, on the other hand, may arise from infective sputum brought up from time to time from a bronchiectatic lung. Children with large tonsils are often much worse after their removal. X-ray treatment of bronchial glands may cure a cough. When all other foci are ruled out, look to the lungs.

In discussion, it was brought out that tonsils apparently innocent, on removal may prove to be the focus of infection.

Dr. Currie asked Dr. Randall's opinion on the dry versus the wet boric-acid treatment, believing himself that much purulent otitis media is caused through the advice of the family physician to "wash with boric acid." Hypertrophied tonsils are always diseased or they would not be enlarged.

Dr. Myers stated that nervous affections have their incipiency in poor health due to foci of infection, and it is true that many of the adolescent insane have lung disease.

Dr. Kahn has found that an apparently normal tonsil may contain pus, and that a cough of several years' duration may come from an antrum. The question of vitamins holds much of the mystery of medicine; recently four cases of xerophthalmia occurred at St. Vincent's home. This possibility should always be borne in mind in young undernourished children.

Dr. Randall believes that the moist treatment of suppurating ears is as good as the dry if the water is used *hot* (108 to 115 degrees), when its action is both stimulating and astringent. Whether the water be borated or not is indifferent. Dry treatment is harmful if the powder is not freely soluble. Tuberculosis does best on iodoform, but the powder is as good as brick dust. With iodoform gauze or zinc sulphate good results are obtained. As to the removal of tonsils, probably it is best to have confidence in the rule, "the normal tonsil is invisible." As to deficiency diseases, syrup of ferric iodid and cod-liver oil were known to cure them long before the discovery of vitamins. In examination of the lungs, too often the change of rhythm of breathing is not given enough attention, and prolonged expiration is overlooked.

MARY A. HIPPLE, M.D., Reporter.

WARREN—JANUARY

The annual meeting of the Society was held January 17th, followed by a banquet in which the wives of the members were invited to participate. After the dinner, cards and music were enjoyed.

The following officers were elected: President, E. S. Briggs; vice-presidents, C. H. VerMilyea, and M. V. Ball; secretary-treasurer, H. R. Robertson.

Twenty-two members and sixteen visiting ladies were present. It was the first time members of the Society had their wives at an annual meeting, and from the general sentiment evinced, the experiment will be repeated.

M. V. BALL, M.D., Reporter.

YORK—JANUARY

The annual meeting and banquet was held at York on January 6, 1927. At the business meeting the following officers were elected for the coming year: president, E. S. Stambaugh, York; first vice-president, T. A. Lawson, Dallastown; second vice-president, P. N. Wentz; secretary, P. A. Noll; reporter, M. H. Cohen; librarian, A. C. Sorenson; censor, H. R. Lecrone; trustee, J. F. Lutz; and editor, C. L. Fackler—all of York. The report of the secretary, given by Dr. P. A. Noll, showed that the Society now numbers 123 members.

The meeting was followed by a banquet. Dr. R. E. Butz was toastmaster, and Dr. Charles Rea provided the music and entertainment. Dr. C. W. Frey, the retiring president, read a paper on "Professional Courtesy," in which he emphasized the courtesy a consultant should show to the physician who refers a case to him. He should make no effort to retain the patient, and should be very careful to uphold the reputation of the doctor who has honored him by referring the case to him.

The incoming president, Dr. E. S. Stambaugh, delivered an address in which he pleaded for coöperation from all the members in furthering the best interests of the Society. In order to combat the cults and irregular practitioners, the sole hope lies in the organized endeavor of the whole profession, and this means loyalty of the individual members to the local, State, and National associations.

Dr. Louis Hamman, of Baltimore, Md., was the speaker of the evening, and delivered an address entitled "Remarks on Diagnostic Procedures." He said there were two main methods of making a diagnosis: (1) diagnostic procedures and laboratory investigations induced by a leading or presenting symptom, and (2) generalized, elaborate, and complete examinations without reference to any particular symptom. Many useless tests are continually being done by men who wish to impress the patient and their colleagues by means of a spurious thoroughness.

The harmful effects of a complete and, in many respects, useless examination are many, the most important being as follows: (1) Overemphasis in the minds of students and interns of the importance of these various procedures, and neglect of common clinical observation. (2) Overdependence placed upon laboratory reports even if they oppose clinical reasoning. (3) The inherent error present in all complex laboratory and diagnostic procedures. (4) The baneful tendency of many laboratory men to suggest therapeutic procedures on the basis of a single laboratory test.

There are three types of patients: (1) Psychoneurotics, in whom a complete examination is indicated to impress the patient and in order not to overlook any real reason for the many presenting symptoms. (2) Cases in which the diagnosis is obscure. Here a complete examination is clearly indicated. (3) The largest group—those patients presenting a clear-cut symptom, in whom the diagnosis can be easily confirmed by simple laboratory procedures and a thorough physical examination. It is this group that is maltreated every day. Time is lost and unnecessary money wasted to confirm a self-evident diagnosis. The use of the laboratory is not to be condemned, but it should be used judiciously and only when clinical observation and physical examination indicates.

MILTON H. COHEN, M.D., Reporter.

The Woman's Auxiliary of the Medical Society of the State of Pennsylvania

Mrs. Samuel Bolton, *Editor*
4701 Leiper Street, Philadelphia, Pa.

COUNTY AUXILIARY REPORTS

ALLEGHENY

The regular meeting of the Allegheny County Auxiliary was held in the Blue Room of the William Penn Hotel, Pittsburgh, November 16, 1926, with Mrs. John McCullough, president, presiding. The business meeting at 1:30 p.m. was followed by a very interesting program. Mrs. Elsie Breese Mitchell, soloist, accompanied by Mrs. Henrietta Bodycombe, rendered two groups of songs, and Mrs. Isaac Davis, pianist, entertained with several selections. Dr. H. H. Collins of the University of Pittsburgh discussed the present status of the evolution theory, with special reference to man's place in nature, illustrating his lecture with charts and lantern slides.

The program was followed by a surprise tea in the Reception Room in honor of our new members. The room was decorated with palms. The tea table decorations were bronze and orange chrysanthemums in a large similarly colored swan, and silver candlesticks with orange-colored tapers. Mrs. James D. Heard and Mrs. J. L. McBride, vice-president, presided at the tea table. Mrs. Joseph Grahek, chairman, and members of the hospitality committee were hostesses of the afternoon.

Our first social event, a benefit bridge party was held in the Reception Room of the William Penn Hotel, December 6, and was most successful with over a thousand in attendance. The proceeds will be used to purchase books for the library of the new Children's Hospital.

Arrangements for the parliamentary law class to be given by Mrs. William Anderson in January have been completed. We have a full class enrollment.

Mrs. John McCullough, Reporter.

MONTGOMERY

A meeting of the Auxiliary to the Montgomery County Medical Society was held on Wednesday afternoon, December 1, 1926, at the Nurses' Home of Montgomery Hospital at the same time as the Medical Society, with each holding separate meetings.

No outside speaker was invited to this meeting, as a great amount of business, old and new, was to be transacted. Reports of both National and State conventions were heard in detail—with the object of inducing members to attend these conventions. Reports of the legislative and membership committees were read.

A new chairman of *Hygeia* was appointed—Mrs. Edgar Buyers. The importance of an intensive drive for subscriptions to *Hygeia* was stressed very strongly, not only for the idea of striving for the prize offered by Mrs. McReynolds, but also the importance of answering the call of the American Medical Association. We are to mark time as it were, but when called to service be ready to act efficiently and quickly.

At the conclusion of the business meeting we adjourned to the larger room where refreshments were served to the members of the Medical Society. This feature of our meeting has been quite successful, we feel, as it gives an opportunity to become acquainted socially—also to impress the society that we organized not to be a hindrance but a real service to them.

Mrs. George W. Miller, Reporter.

WESTMORELAND

The Woman's Auxiliary of the Westmoreland County Medical Society met Tuesday afternoon, January 4, at the Y. M. C. A. building of Greensburg, Pa.

Reports were given regarding baskets and money distributed to needy families at Christmastime. In addition to families cared for, each child at Mt. Odin Orphanage was given a toy bearing his or her name.

Following the business meeting, the club members sewed carpet rags for the School of the Blind in Pittsburgh for use in making rugs. At the end of the afternoon Mrs. Blackburn of Latrobe was awarded a prize for having the largest and heaviest ball of rags.

Mrs. Paul McKelvey, Reporter.

COLLEGES NOW TRAIN BOTH MIND AND BODY

Although this has been called the age of the child, it could never have become so if it had not first been the age of woman. Woman has become emancipated, mind and body, and the college education has played a large part in this emancipation, declares Marie B. Ryan in *Hygeia*. The expression, a sound mind in a sound body, has become applicable to men as well as to women, and when the woman goes to college to get the one, she is sure to demand the other.

For this reason colleges and universities now have well-equipped and adequately staffed departments of physical education. No matter what line of work the woman is to follow, she cannot do justice to her work, her country, or herself unless she has a healthy, strong body. She must be taught how to keep it so, and she must be able to teach this to children, since child guidance, either in the home or the school, is so largely woman's province.

In recognition of this fact, many states are now requiring all elementary school teachers to be able to teach physical education to their pupils, or to lead them in simple exercises and games. Many teachers are faced with the necessity of learning now what they should have learned ten or fifteen years ago, and the task is not easy. Yet it is just as important, just as high an ideal for a teacher, to make one girl enthusiastic about health problems as it is to make one boy enthusiastic about raising hogs and cattle or wheat and corn, thinks Miss Ryan.

HEADACHE A MALADY OF CIVILIZATION

Headache is a malady of civilization and is rarely found among uncivilized people, declares Dr. Harry Campbell. Its chief cause is an unhealthy state of the blood, engendered by an unhealthy mode of life, such as unwholesome food, insufficient exercise in the open, stuffy rooms and late hours, according to a report in the *Journal of the American Medical Association*.

Considering the physical damage that overtraining in athletics may produce, President Lowell, of Harvard University, should be upheld by the medical profession in his theory that athletic training should be directed not to the development of special teams but to the promotion of the health and physical well-being of all the students. While this policy may not be popular for a while, there is no doubt that it is eminently correct.

THE

MEDICAL SOCIETY OF DELAWARE

MEDICAL PRACTICE IN THE NEW ERA*

WENDELL C. PHILLIPS, M.D.
PRESIDENT OF THE AMERICAN MEDICAL ASSOCIATION
NEW YORK, N. Y.

It may seem strange to some of you that a man who has spent so many years in practice of a specialty should have the courage to suggest to medical men in general practice some of the things he thinks they ought to do, and furthermore to claim that many specialists and general surgeons are forgetting the fact that primarily they are physicians.

When I began to study medicine, I spent some time with a man whom I had the honor of calling a preceptor, as we then termed it "reading medicine." This man had no great fund of medical knowledge, but in driving around with him and seeing what he did in the home, I imbibed the spirit of medicine and the medical man. He was not a scientist, just a plain doctor, but he had something that I am afraid we are losing in the preparation of our medical students today. We describe our profession as the "art and science of medicine." At present we are developing the scientific phase and its teaching marvelously. Our pupils are gaining knowledge that the older men thought would never be possible, but I am afraid the undergraduate schools are not teaching sufficient of the art of medicine.

I am finding no fault with the teaching of the science of medicine, nor do I think we should lower the standards of medical education, but I do believe the time has come when the schools should take into serious consideration the addition to their curriculum of proper instruction in psychology and all the other subjects that pertain to the art of medicine, so that their graduates will have a better conception of what practice really means. In other words, the undergraduate school should do what the old preceptor did for us in teaching the real spirit of the profession as it is carried in the hearts of devoted physicians.

The business of the undergraduate school, as I understand it, is to teach men scientific medicine and how to become general family practitioners. I would place the "family physician" on a pedestal in the medical world. The properly qualified general practitioner should be able to take care of at least eighty per cent of all the ills of human beings, aided by the paraphernalia of his own office. It is for the other twenty per cent that we need the specialist. There should not be over this number of practicing specialists, including general surgeons.

But what about the changed work of the family practitioner? In former times his daybooks recorded cases of diphtheria, whooping cough, measles, typhoid fever, smallpox, etc. But that day has gone by; that kind of work is practically a thing of the past. A new era has arrived which calls for a different type of practitioner, and the physician must prepare himself to meet the new demand that he keep people well. He must be prepared to take care of a public that will know more about their own bodies than they know today because there is already being advanced a comprehensive system of public-health education. This health knowledge should come from the family doctor. There is just one source whence reliable health knowledge may be obtained. Physicians, by education, history, heritage, and training, are the only possible source from which it can come.

First we must teach the people that they can keep well. They must have public-health information, and the practitioner of medicine should be the purveyor of it in his community. He should have charge of all personal and public-health teaching.

This sounds like a big problem, but it is not so great. The family physician of the future must educate his patients in preventive medicine, and be to some extent a health administrator. His chief service will be to keep his patients well, and that can be possible only by obtaining intimate clinical information, properly recording it, and keeping a record of the periodic examination of every man, woman, and child in the community.

*Address delivered before the Medical Society of Delaware, Dover, Delaware, October 13, 1926.

This keeping of records needs to be stressed. Is such information being *recorded* by physicians today? The great business organizations have their employees examined and the results recorded, and some of the life-insurance companies are very careful to have their policyholders examined every year, and records kept. But they are not kept where they should be. Every individual should have a health record in the files of his family physician. Too many people worry through life with only fairly good health, and while they accomplish their daily duties, they may never know the exuberance and happiness of perfect health. Hence, one goal of the future practitioner of medicine will be the attainment and maintenance of the good health which is the inherent right of every one. A higher average of health means a higher average of happiness, comfort, usefulness, and economic value of the individual.

Health and welfare organizations, both national and local, are invading the field of preventive medicine. Great industrial organizations have introduced various health measures, believing it to be for their own best interests from an economical standpoint as well as for the benefit of the hundreds of thousands of employees. Pay clinics and group practice have made some slight imprint on the modes of practice of today. Furthermore, the publicity work of all these agencies is teaching the public that they must have themselves well taken care of. But the task will never be completed until millions are devoted to the purpose, and physicians become the purveyors of public-health information and are prepared to give it as part of their business and duty.

The question has been asked how a doctor will be able to live under these new conditions. If the future practitioner of medicine takes his new place in the sun and does his work well, he will meet financial prosperity such as has never been known in the every-day experience of the physician. Already people throughout the country are asking their family physicians for periodic health examinations, and unfortunately some of the physicians are saying to these inquiries: "You don't need looking over. You are all right." Such a doctor is either careless or ignorant. The keeping of proper records is going to be an important part of the solution of the problem. There should be a record in the physician's office of every child born under his care. The time soon comes when the child should be vaccinated, and the date of that should be recorded. Later there may be other treatments, and after a while there is collected a great mass of information in these records. This service is valuable, more so than service to the sick, and people will be ready to pay for it. There will be an entirely new outlook on the matter, and if the doctor keeps such records, his patient will never go to other organizations for information or treatment.

We specialists have the advantage on you general practitioners in the matter of record-keeping. I am beginning my forty-fourth year of actual practice of medicine, forty-two of which have been spent more or less in specializing. Patients come into my office whom I have not seen for from twenty to thirty-five years. My records show their history, the condition at the time I last saw them, etc., and this can be compared with the present condition. These patients come to me because they know I have their records. Such work will probably require clerical help, but I believe that in the future, family doctors will be able to employ such assistants.

Yesterday at the Pennsylvania meeting a report was made on the activities of nurses in public-health work. While admitting the necessity for the work, the objection was offered that the nurses in various organizations were practicing medicine. My answer was: "If the nurses do not do it, who is going to do this work? The doctors are not doing it." Family physicians should undertake public-health teaching. Naturally it requires time and sacrifice.

Hygeia, which is published by the American Medical Association, goes into many lay homes, and clip sheets from it, through newspapers and magazines, reach millions of readers. One of the life-insurance companies claims to spend four millions a year on public-health education and preventive medicine. The various individual health organizations cover a wide field. The people are beginning to demand authentic information. The physician of the future, if he expects to meet these demands in such a manner as to prevent the unfortunate entry into medical practice of so-called state medicine, must prepare himself educationally, morally, psychologically, and sociologically to make the painstaking intimate personal contact with his individual patient so effective, outstanding, and unassailable that no other form of medical practice will be permitted by the layman himself. The American Medical Association headquarters every day gives out to great organizations and great publications information regarding health matters. Such queries are answered as "This has to do with the health of the people. We should like to know whether it is fraudulent or true." And they abide by our statement. The *Evening Post*, of New York City, recently made a statement that it is regrettable that a profession possessing

such profound information pertaining to the public health as the medical profession should be so tongue-tied.

In conclusion, I would say that the scheme of undergraduate medical education should be reconstructed to include in its curriculum as a prominent feature the science and art of health conservation and the art of applying the principles of the science of medicine through the personal relationship of the physician and his patient. The undergraduate student must be trained to treat the body from the standpoint of health as well as that of disease. These added requirements to the educational program of the future physician emphasize the argument against any lowering of the standards of medical education or lessening of the time involved in the teaching process.

Public-health education is an outstanding need of the hour. The gospel of personal and community health is complex. It should be promulgated by health departments and agencies, by lectures, radio, and film; but it will never reach its highest efficiency until it includes a maximum of direct personal instruction by properly qualified family physicians. The patient of the future, in view of his perfected health education, may be expected to derive from it a wise judgment which will lead him to seek the continued advice and counsel of his personal physician. Furthermore, in view of our perfected system of individual and community health education, cults and other menaces to health, all of which are founded on theories for the most part baseless and futile, will gradually disappear before the rising sun of enlightened public opinion.

The ideal family physician of the future, through training, experience, and expert knowledge of health conservation, will exercise a potential power which will qualify him to control and direct the health problems of men. The family physician of the future must have proportionate representation in the councils of his profession. No specialty or combination of specialties, not even general surgery, should be permitted to dominate the health affairs of a community or nation.

While it is true that the service rendered by a physician may not be measured in terms of finance, in no sense should the physician of the future offer this as an excuse for slothfulness in the management of his business affairs. Every detail of his newer service in the prevention of disease is of great value to his patient. Health education and conservation are worth more to the patient than repair of the ravages of disease.

The maintenance of individual practice in the person of the general practitioner or family physician is of the utmost importance for the survival and continuation of the home as the foundation of the nation.

ABSTRACT OF DISCUSSION

P. W. TOMLINSON, M.D. (Wilmington, Del.): One of the most vital messages which I had hoped to bring back from the meeting of the American Medical Association was the question of preventive medicine. This is the most important question before the medical profession today.

A. T. DAVIS, M.D. (Dover, Del.): Every health officer in the United States agrees that no health program, regardless of the amount of money behind it or the amount of personality, can possibly succeed without the family physician. He is the one who sees every family, and upon him rests the responsibility for putting across any health program. Upon his advocacy of vaccination or immunization to diphtheria will depend the widespread adoption of these measures. No program will succeed that does not take into consideration the fact that the family physician forms seventy-five per cent of it.

I. J. MACCOLLUM, M.D. (Wyoming, Del.): Dr. Phillips stated that the nurses are doing things the general practitioners are not doing. If doctors were paid as are the public-health nurses, they would then be able to do more. They cannot do some of the work that the public-health nurses do because it would necessitate using their own time, paying their own expenses, and furnishing their own material.

WILLARD SPRINGER, M.D. (Wilmington, Del.): I believe in recordkeeping, and constantly have people coming to me to ask when their children were born, for these facts are not in the public records.

Two illustrations of the value of records may be cited: A young man wanted to enlist in the Army during the war. He claimed that he was eighteen. His mother claimed that he was not. My records showed that he was right. In another instance a young woman wanted a certificate of birth in order to secure a passport. She reported that the Board of Health did not have a record of her birth, although I knew I had turned it in. This is a frequent happening. If the physician can produce such records it is very satisfactory. The importance of keeping records cannot be too strongly stressed to the younger men.

DR. PHILLIPS (in closing): Dr. MacCollum has mentioned some points that should be taken care of by organized medicine. This can be done only by organization. While public-health work will be of benefit to the physicians, certain associations state that they have been unable to interest the doctors of their communities. We must confer and find the best way to accomplish needed reforms.

The medical director of the Veterans' Bureau has suggested the coöperation of that organization with the American Medical Association in legislative matters. They have more than eight hundred doctors working there, and their activities are prescribed by law. Now some promotors are trying to get a foothold, but if our organization would carry the fight to Washington, such legislation as that now pending would never pass. If medical men had the proper energy, there would never have been a licensed chiropractor in the Union. Many unfortunate conditions are in existence because medical men have lain down on the job.

COUNTY SOCIETY REPORT

NEW CASTLE—DECEMBER

The Society held its December meeting at the University Club, Wilmington, with President Speer in the chair.

Case reports were presented by Drs. Briggs and Wagner, and Dr. McMillan, of Philadelphia, gave a very interesting résumé of the present knowledge concerning rheumatism, illustrated by lantern slides of electrocardiograms. Drs. Robin, P. Tomlinson, and C. Wagner participated in the discussion. Dr. Briggs read a short memorial commentary on the life of Dr. Henry Willis.

The Klair Law was discussed, and a modified form of the resolution passed by the Physicians and Surgeons Hospital Association was adopted. Motions were passed donating $50 to the University Club for their past and present courtesies, and $10 to the University Club steward for his help at the meetings and luncheons. A resolution was read by Dr. Tarumianz pertaining to the election of rural members to the various offices of the Society—something neglected in the past. This resolution will be acted on at a later meeting.

The following officers were elected: President, Dr. C. P. White; vice-president, Dr. Lewis Booker; secretary and treasurer, Dr. B. S. Vallett; censor, Dr. Hermann Miller; director, Dr. B. A. Jenkin; delegates, Drs. Paul Smith, Speer, Bird, Robin, Niles, Forrest, Ellis, E. Vaughn, Washburn, Voss, Fenimore; alternates, Drs. William Marshall, Butler, Rigney, Boehm, Samuel, Beck, Miller, Bonner, Bell, Lendermann.

Dr. Charles Peter White was escorted to the chair by Dr. Speer, and made a brief speech of acceptance. On motion by Dr. Veasy, Dr. Speer was given a rising vote of thanks for his good work during the year.

Brice Sewell Vallett, M.D., Secretary.

Medical News

Deaths

Mrs. Lucy Sturgis Jefferys, wife of Dr. William H. Jefferys, of Rosemont; January 2.

Henry Harding, M.D., of Philadelphia; Jefferson Medical College, 1885; aged 83; January 20.

Albert J. Hepler, M.D., of New Bethlehem; Jefferson Medical College, 1886; aged 69; recently.

R. Abbott Smith, M.D., of Uniontown; Jefferson Medical College, 1906; aged 45; December 31, of pneumonia.

Mrs. Edith Roach Fielding, wife of Dr. Lewis O. Fielding, of Philadelphia, after a year's illness, January 13.

Henry D. Michler, M.D., of Easton; University of Pennsylvania School of Medicine, 1881; aged 70; during 1926.

Orrin H. Rosser, M.D., of Renovo; Medico-Chirurgical College of Philadelphia, 1890; aged 61; December 31, of pneumonia.

Harry L. Shaffer, M.D., of Pittsburgh; Hahnemann Medical College and Hospital of Philadelphia, 1914; aged 40; in December.

Frederick P. Henry, seven-year-old son of Dr. and Mrs. J. Norman Henry, of Philadelphia; January 15, of diphtheria.

Katherine Radley, M.D., of Philadelphia; Woman's Medical College of Pennsylvania, 1902; December 30, of heart disease.

Benjamin F. Dilliard, M.D., of East Bangor; College of Physicians and Surgeons, Baltimore, Md., 1881; aged 68; during 1926.

John J. Gildea, M.D., of Wilkes-Barre; Medico-Chirurgical College of Philadelphia, 1912; aged 37; December 8, of pneumonia.

Joseph S. Hunt, M.D., of Easton; Medical Department of Columbia College, New York, 1866; aged 90; recently, of arteriosclerosis.

John W. Wright, M.D., of Erie; Jefferson Medical College, 1890; health director of Erie; aged 58; December 14, of heart disease.

Joseph H. Ross, M.D., of Philadelphia; Jefferson Medical College, 1894; chief surgeon and medical director of St. Mary's Hospital; aged 52; January 10.

Ashton B. Talbot, M.D., of Philadelphia; Jefferson Medical College, 1888; retired; made several trips around the world; aged 66; January 16, of acute indigestion.

Ivy F. MacNair, M.D., of Littlestown; Atlantic Medical College, Baltimore, Md., 1909; formerly practiced in Philadelphia; aged 55; January 5.

Bart J. Smith, M.D., of Windber; Maryland Medical College, Baltimore, 1902; World War veteran with rank of captain; aged 46; January 3, from a complication of diseases.

Robert A. Rambler, M.D., of Harrisburg; Jefferson Medical College, 1883; medical examiner for fraternal and insurance organizations for many years; aged 68; January 4, of heart disease.

Henry E. Emerson, M.D., of Milford; Medical Department of the University of the City of New York, 1892; formerly a druggist; member of the board of education for thirty-five years; aged 60; November 22, following a thyroidectomy.

John K. Roberts, M.D., of Meadville; University of Wooster, Medical Department, Cleveland, Ohio, 1880; former health officer; member of the draft and pension board during the World War; aged 70; December 29, following a long illness.

Harry S. Seiwell, M.D., of Retreat; University of Illinois College of Medicine, Chicago, 1913; member of the American Psychiatric Association; medical superintendent of the Retreat Mental Hospital; served during the World War; aged 41; December 30, of pneumonia.

Births

To Dr. and Mrs. W. E. Turner, of Montgomery, a son, recently.

To Dr. and Mrs. S. Le Roy Ridge, of Langhorne, a daughter, December 31.

To Dr. and Mrs. Samuel Horton Brown, of Cynwyd, a son, Franklin Luburg, December 19.

To Dr. and Mrs. Charles M. Kerwin, of West Chester, a daughter, Patricia Jane, December 8.

Engagements

Miss Margaret Elizabeth Fowels, and Mr. Thomas Fussell Boon, son of Dr. and Mrs. W. T. Boon, of Philadelphia.

Miss Eleanor Virginia Briggs, daughter of Dr. and Mrs. H. W. Briggs, of Wilmington, Del., and Mr. Edwin Francis Lewis, 2d.

Miss Mary Fleeming Hare Hall, and Mr. Courtland Yardley White, 3d, son of Dr. and Mrs. Courtland Y. White, Jr., Philadelphia.

Miss Alyse Varney Plank, of Collingdale, and Dr. Charles William Mayo, son of Dr. and Mrs. Charles H. Mayo, of Rochester, Minn.

MISS MARGARET MARY COMBER, sister of Dr. and Mrs. Charles C. Wolferth, of Philadelphia, and Mr. John Anthony Johann, of Germantown.

Marriages

MISS PAULINE MAUD MILLINGTON, daughter of Mrs. Nancy Millington, to Dr. Louis W. Schwindt, of Philadelphia, January 21.

MISS ANNETTE FREIDBERGER ESHNER, daughter of Dr. and Mrs. Augustus A. Eshner, of Philadelphia, to Mr. Paul David Dalsimer, December 21.

MISS RHODA ROBBINS, daughter of Dr. and Mrs. Clifton Z. Robbins, of Bloomsburg, to Mr. Edward Samuel Shedd, at Rapid City, S. D., December 20.

Miscellaneous

DR. HOWARD PURSELL, of Bristol, suffered a stroke of apoplexy during the early part of December.

TOXIN-ANTITOXIN was administered free to all children of Woodlawn, January 27, February 3 and February 10.

SCARLATINA is unusually prevalent in Warren, and a number of adults have been afflicted.

DR. J. W. HAMILTON, of Warren, has nearly recovered from an infection of the leg complicated by erysipelas.

DR. ERNEST J. COWDEN, of Warren, is recovering from an attack of nerve exhaustion which came on several months ago.

A GIRLS' DORMITORY, accommodating thirty-two patients, has been opened at Devitt's Camp, Allenwood.

THE RECORDS OF THE BUREAU OF VITAL STATISTICS of Philadelphia County show that about 2,000 more boys than girls are born annually.

THE BOARD OF MANAGERS of the Bloomsburg Hospital have opened a drive to provide a fund for a badly needed addition to the Hospital.

DR. AND MRS. BAYARD KANE and their daughter, Miss Mabel Bayard Kane, of West Chester, sailed on January 15 for Bermuda, where they will remain six weeks.

DR. JAMES R. SMITH, World War veteran, has been appointed health director of Erie to fill the vacancy created in the office by the death of Dr. J. W. Wright.

ABOUT 600 DELEGATES from all sections of the country attended the annual convention of the Phi Lambda Kappa medical fraternity in New York City in December.

DR. WALTER F. MYLIN, of Lancaster, has resigned as physician in charge of the Lancaster County Hospital and insane asylum. His resignation was effective January 1.

DR. R. S. HADEN, of Kansas City, addressed the staff of the Pittsburgh Diagnostic Clinic on February 2 at the Hotel Schenley. His subject was "Focal Infection."

DR. MABEL E. ELLIOTT has recently received her license as a practitioner from the Government of Japan. Dr. Elliott is the only American woman permitted to practice in Japan.

THE ANNUAL CONGRESS on Medical Education, Medical Licensure, and Hospitals will be held at the Palmer House, Chicago, Ill., February 14, 15, and 16. An interesting program has been prepared.

DR. JOHN N. SNOKE, assistant director of Johns Hopkins Hospital, Baltimore, has accepted the position of Superintendent of the Bryn Mawr Hospital. He will assume his new duties on February 15.

THE FIRST LECTURE of the Practical Lecture Series of the New York Academy of Medicine for 1927 was given by Dr. David Riesman, of Philadelphia, on January 7, his subject being "The Treatment of Pneumonia."

THE CONVENTION of the American Student Health Association was held in New York City, December 29 and 30. Dr. Harold S. Diehl, head of the Student's Health Service at the University of Minnesota, was elected president.

ON JANUARY 1, the health department of Fayette County ordered indefinitely closed all theaters, churches, schools, and lodge rooms as a means of curbing a scarlet-fever epidemic which has been raging there for a month.

THE SEVENTY-FIFTH ANNIVERSARY of the founding of the Episcopal Hospital, Philadelphia, was celebrated January 18 with the dedication by Bishop Thomas J. Garland of a new wing to the nurses' building, which was constructed at a cost of $90,000.

THE NINTH ANNUAL MEETING of the Western Physiotherapy Association will be held in Kansas City, April 8 and 9. Full information and prospectus may be obtained from the Secretary, Dr. Charles Wood Fassett, 115 East 31st St., Kansas City, Mo.

DR. HUBERT WORK, Secretary of the Interior, was formally installed as president of the Associated University of Pennsylvania Clubs at a reception held January 9 in Philadelphia. The club represents 40,000 alumni of the University in all parts of the world.

DR. ROGER ADAMS, head of the department of chemistry in the University of Illinois, is the 1927 winner of the Nichols Medal in Chemistry. The award went to Professor Adams for his work on "acids of chaulmoogra" in the treatment of leprosy.

DR. GEORGE MINOT, Associate Professor of Medicine at the Harvard Medical School, delivered the Emmerling Memorial Lecture at the Pittsburgh Academy of Medicine on January 11. His subject was "Pernicious Anemia, With Special Reference to its Dietary Treatment."

THE BUCKS COUNTY PUBLIC HEALTH ASSOCIATION has been organized to bring about a better understanding of health problems and needs and the coöperation of the public with the health authorities. The president of the association is Miss Laura C. Haines, of Doylestown.

DR. W. W. KEEN, "dean of American surgery," celebrated his ninetieth birthday on January 19. A meeting, largely attended, was held in his honor at the First Baptist Church in the evening, at which time he described the tremendous advances made in medical science during his life.

DR. J. TORRANCE RUGH was elected president of the Medical Club of Philadelphia at its annual meeting held on the evening of January 21 at the Bellevue-Stratford Hotel. Drs. Philip Marvel and Alexander MacAlister were elected vice-presidents; Dr. William S. Wray, secretary; and Dr. George A. Knowles, treasurer.

DR. JOHN J. GILBRIDE, of Philadelphia, took part in the symposium on "Nature and Treatment of Arteriosclerosis," at the regular meeting of the Medical Association of the Greater City of New York, on Monday evening, January 17. The title of Dr. Gilbride's paper was "Arteriosclerosis and its Interest to the Surgeon."

THE UNITED STATES BUREAU OF CHEMISTRY is now preparing to resurvey the entire field of pharmaceutical preparations. The ultimate purpose of this work is to eliminate substandard drugs from the American market with as little confusion as possible, so that physicians can rely upon the accuracy of the remedial agents which they prescribe or dispense.

AT THE CONVENTION of the Association for Research in Nervous and Mental Diseases, held in New York

City, December 28 and 29, it was stated that there was unfolded marked progress in the knowledge and understanding of the cerebellum. At the 1927 convention, the topic for discussion will be intracranial pressure and its effect on brain diseases.

DR. D. ROMAN, of Philadelphia, recently spent some time in the West Indies, completing arrangements for the annual convention of the American Institute of Homeopathy, which will be held aboard the steamship Lapland in May. During the cruise, stops will be made at Nassau, Havana, Kingston, Santiago, and Colon. Five hundred physicians and laymen will attend the convention.

DR. WILLIAM C. HUNSICKER, of Philadelphia, has been selected as the Republican candidate for State Senator to succeed the late Senator William J. McNichol. Dr. Hunsicker is Professor of Urology at the Hahnemann Medical College and a staff surgeon in its hospital. He is also surgeon of the State Homeopathic Hospital at Allentown and of St. Luke's Hospital, Philadelphia.

A DEPARTMENT OF RESEARCH in pure chemistry has been established in the Mellon Institute of Industrial Research, University of Pittsburgh, with Leonard H. Cretcher, Ph.D., in charge. The activities of this department will be an integral part of the Institute, and will be sustained by institutional subsidy. William L. Nelson, Ph.D., has been named the first fellow in the new department.

THE SESQUI-CENTENNIAL EXHIBIT of the Society for the Prevention and Treatment of Tuberculosis has been presented to the University of Pennsylvania to be placed on permanent exhibition in the School of Hygiene. The exhibit is a graphic study of present-day efforts in the treatment and prevention of the disease. It consists of eighteen miniature stages divided into four groups, each dealing with a particular phase of the disease.

AT THE 17TH ANNUAL MEETING of the National Committee for Mental Hygiene, which took place on November 11, at New York City, the following officers were elected for the coming year: president, Dr. Charles P. Emerson, of Indianapolis; vice-presidents, Dr. James R. Angell, of New Haven, and Dr. Bernard Sachs, of New York; treasurer, Frederick W. Allen, New York; and secretary, Clifford W. Beers, of New York.

UNDER THE AUSPICES of the Pennsylvania School of Social and Health Work, tuberculosis authorities from every part of the country will meet in Philadelphia March 14 for a twelve-day conference. The meetings, to be known as the Regional Institute for Tuberculosis Workers, will be addressed by men who have attained prominence in fighting this disease. Headquarters will be in the Social Service Building, 311 South Juniper Street.

THE FOLLOWING PENNSYLVANIA SURGEONS recently spent some time in Boston visiting the hospitals and clinics: Dr. Harvey F. Smith, Harrisburg; Dr. Harold L. Foss, Danville; Dr. Donald Guthrie, Sayre; Dr. A. F. Hardt, Williamsport; Dr. Jonathan M. Wainwright, Scranton; Dr. William L. Estes, Jr., Bethlehem; and Dr. John B. Lowman, Johnstown. This group makes several trips a year, last year having visited the clinics in Cleveland and Washington.

AT THE ANNUAL SESSION of the American Association for the Advancement of Science, held in December at Philadelphia, a prize of $1,000 was awarded, the highest honor it can bestow, to Dr. George David Birkhoff, Professor of Mathematics at Harvard University, for the paper presented by him on "A Mathematical Critique of Some Physical Theories." This paper was considered the most notable contribution to the advancement of science of all the 2,000 papers presented at the session.

AT THE ANNUAL REORGANIZATION of the board of poor directors, Norristown, it was decided to construct a contagious-disease hospital to be operated in conjunction with the county home at Black Rock. While the proposed hospital would be primarily for the treatment of indigent persons suffering from contagious diseases, it is also planned to accommodate paying patients and to receive cases of contagious diseases that now must be treated at private homes or in general hospitals.

THE HARRISBURG ACADEMY OF MEDICINE has taken the first steps toward the acquisition of a new home by appointing a committee of five men to investigate suitable sites, the type of building to be erected, and the plan of financing the work. At a recent meeting of the Academy the following officers were elected for the ensuing year: president, William T. Douglass; vice-presidents, C. C. Cocklin and Allan Z. Ritzman; secretary-treasurer, Jesse L. Lenker; and librarian, A. H. Bucher.

HARRY A. MACKEY, City Treasurer of Philadelphia, and former chairman of the Workmen's Compensation Bureau of Pennsylvania, has accepted the chairmanship of the Legislative Committee of the Mothers' Assistance League, which is interested in bringing before the Pennsylvania Legislature the need for increasing the budget of the Mothers' Assistance Fund. This fund takes care of thousands of mothers left without income, and it is estimated that the amount of $4,000,000 will be necessary for 1927.

A FOUNDATION OF NURSING EDUCATION has been established at the University of California with Mary May Pickering, R.N., as its head. The work will be conducted under the supervision of the Department of Hygiene, and will include courses in teaching and administration in schools of nursing, accompanied by correlated courses in the history of education, in psychology, principles of pedagogics, and preventive medicine. The foundation is endowed by surplus funds from the bureau of registration of nurses.

THE UNITED STATES CIVIL SERVICE COMMISSION announces an open competitive examination for the following: Assistant Medical Officer, Associate Medical Officer, Medical Officer, and Senior Medical Officer. Applications will be rated as received until June 30, 1927. Full information and application blanks may be obtained from the United States Civil-Service Commission, Washington, D. C., or the secretary of the board of U. S. civil-service examiners at the post office or customhouse in any city.

ROBERT S. BREED, of the Agriculture Experiment Station at Geneva, N. Y., was elected president of the American Society of Bacteriologists at its annual meeting recently. The society's new council includes Dr. S. G. Ayers, of New York; Dr. F. M. Huntoon, of the H. K. Mulford Laboratories, Philadelphia; Dr. R. E. Buchannon, of Iowa State College; and Major A. P. Hitchens, of the Medical Department, United States Army, in the Philippines. The next session of the society will be held at Rochester, N. Y.

DR. HUBLEY R. OWEN, chief of the medical division of the Department of Public Safety, Philadelphia, has ordered a physical examination of the drivers of all motor vehicles in the police, fire, and electrical bureaus. It is considered that about 15 per cent of the personnel are unfit for active service, and should be retired to make way for young and vigorous men. Dr. Owen states that the Philadelphia police cannot be compared favorably with the New York and Chicago departments so far as efficiency is concerned.

THE BROTHERHOOD OF SLEEPING CAR PORTERS has asked the United States Board of Mediation to hear its plea for an increase in wages and abolition of tipping. The porters ask for a minimum wage of $150 a month in place of $72.50, the present minimum, and a maximum of 240 hours' service a month. We are

frequently told that tipping is frightfully abused by the American public, both at home and abroad. The no-tipping signs are appearing here and there, and will ease the tension of those who feel that too often they are being unnecessarily gouged.

THE ARMY MEDICAL DEPARTMENT was recently notified that the gold medal of the International Committee of the Red Cross has been awarded to it in the competition of "wound cards" recently held at Geneva in connection with the meeting of the International Standardization Committee. The cards are used to tag the sick and wounded in the field for evacuation and record purposes, and are eventually filed in the War Department, where they are found of great value in the adjustment of claims for pensions and compensation as well as in the study of medical history.

THE SCHUYLKILL VALLEY MEDICAL CLUB, composed of physicians from Montgomery, Philadelphia, Chester, Bucks, Delaware, and Berks Counties, meets every four to six weeks for social intercourse. This club made its annual inspection and visit to the Norristown State Hospital, January 18, and after visiting many of the wards, motion pictures were shown. Following this a musical was given by the patients and hospital orchestra. The seventy who attended expressed approval of the new up-to-date methods of treating the mentally ill. They were afterwards entertained at dinner by Drs. J. Quincy Thomas and S. M. Miller.

HAVING DECIDED at the age of 14 that life was meaningless and futile, and having spent two years in vain and solitary efforts to overcome his philosophy of despair, Rigby Wile, 16-year-old son of Dr. Ira S. Wile, of New York City, noted child specialist and psychiatrist, killed himself in January. That Dr. Wile might have been able to save his son, had he confided his doubts to his father, is suggested by somewhat analogous cases described by Dr. Wile in his book, "The Challenge of Childhood," published last year. Discussing dozens of cases of mental disturbances and abnormalities in children, Dr. Wile's book told how he cured two adolescent girls of suicidal tendencies by psycho-analysis.

PROVISION FOR A $3,500,000 VETERAN'S HOSPITAL for Philadelphia is included in a $16,000,000 appropriation bill, drawn up by Chairman Johnson of the House Veteran's Committee, Washington. The measure, which follows recommendations of the American Legion at its convention in Philadelphia in October, would authorize 5,000 additional beds. Resolutions, favoring the passage of this measure and urging that hospital No. 49 at Twenty-fourth Street and Gray's Ferry Road in Philadelphia be converted into a diagnostic clinic, were adopted by the Executive Committee of the Eastern Section of the Pennsylvania Mental Hygiene Committee of the Public Charities Association. These resolutions were also endorsed by the Mental Hygiene Divisional Council, which is the State executive body of the Pennsylvania Mental Hygiene Committee of the Public Charities Association.

THE FOLLOWING PHILADELPHIA HOSPITALS and charitable institutions have been remembered in wills recently admitted to probate: From the estate of Mrs. Adelaide V. Brunner, the University of Pennsylvania Hospital is the beneficiary of $5,000; the Home of the Merciful Saviour for Crippled Children and the Philadelphia Home for Incurables, bequests of $5,000 each. From the estate of Mary Luders, $4,000 to the Pennsylvania Industrial Home for Blind Women; $35,000 to the Lankenau Hospital, Philadelphia, for the establishment of six beds; $10,000 to the German Society of Philadelphia for the relief of distressed Germans; $5,000 to the Children's Homeopathic Hospital; $5,000 to the Little Sisters of the Poor; $3,000 to the Philadelphia Society for Organizing Charity; $15,000 to the Kensington Hospital for Tuberculosis; $15,000 to the German Protestant Home for the Aged; and $1,000 to the Children's Seashore Home, Atlantic City.

THE SALESMEN OF THE ABBOTT LABORATORIES and the Dermatological Research Laboratories from the Middle West and the South met in the home offices of that company in North Chicago the week of December 27. Four days were spent in intensive study of the Abbott and D. R. L. products. Addresses were made by Dr. Alfred S. Burdick, President of the Abbott Laboratories, who reviewed the progress of the company, and introduced Dr. G. W. Raiziss, Professor of Chemotherapy, University of Pennsylvania, who spoke on the newer arsenical compounds, particularly Bismarsen, a new combination of bismuth and arsenic; Dr. Roger Adams, Professor of Chemistry, University of Illinois, who told of his investigations in the field of chaulmoogric acids; and Dr. A. G. Young, of the University of Michigan, who spoke of the treatment of arthritis deformans with o-iodoxy benzoic acid, amidoxyl. A meeting of the Eastern sales force of the Abbott Laboratories was held in New York City in January.

FELLOWSHIPS FOR TRAINING in extramural psychiatry are again available to a limited number of qualified applicants, announces the National Committee for Mental Hygiene, in a recent statement. These fellowships are made possible by a renewal, from the Rockefeller Foundation, for a second period of three years, of its appropriation of $40,000 to the National Committee for Mental Hygiene which administers the fund and directs the training of fellows. These fellowships are designed to provide special training for physicians who have had previous hospital training in psychiatry, but who wish to prepare themselves for extramural work in child guidance, delinquency, education, dependency, and industry.

Fellowships are open to physicians under thirty-five years of age, who are graduates of Grade-A medical schools and have had at least one year of training in a hospital for mental diseases, maintaining satisfactory standards of clinical work and instruction. A longer period of mental-hospital training is desirable. A different type of fellowship is also available for the training of social workers in psychiatric social work. Applicants for fellowships in psychiatric social work must hold a collegiate degree, be under thirty years of age, and be free to devote themselves to a period of professional work upon completion of their training. Applications for either type of fellowship are now being received at the National Committee for Mental Hygiene. Blanks for this purpose may be obtained by addressing Dr. Frankwood E. Williams, 370 Seventh Avenue, New York City.

A CONTRIBUTION OF $250,000 from the Carnegie Corporation to the University of Pennsylvania for the endowment of medical research in the University's school of medicine and a gift of $25,000 from Charles H. Ludington for research work in the Henry Phipps Institute during the current year were announced at a conference at which prominent men from various professions and industries met with the representatives of the University of Pennsylvania's medical alumni group to discuss plans for the further development of the schools, hospitals, and institutions which contribute to medical service at the university. Four major projects for which the University's medical Committee announced that it would endeavor to obtain $3,050,000 were outlined during the conference. Of the amounts sought, $1,100,000 already has been pledged contingently.

The first of these projects is the Martin Maloney Medical Clinic, designed to establish a center for the study and treatment of medical diseases and for investigation as well as publication and diffusion of knowledge regarding such diseases. For this project, $1,000,000 is sought. A contingent gift of $250,000 to be devoted to the construction of this new clinic was received by the University last January from Martin Maloney, philanthropist, of Spring Lake, N. J. For endowment of the Henry Phipps Institute for the study of prevention and cure of tuberculosis the sum of $3,350,000 is sought, of which $850,000 is in hand. The third project is the raising of an endowment of

$200,000 for the establishment of a Joseph Leidy Professorship of Anatomy in honor of the memory of Dr. Joseph Leidy, who, prior to his death in 1891, was Professor of Anatomy at the University of Pennsylvania, and one of the leading anatomists of his time, as well as a biologist. The fourth project calls for the establishment of a Philip Syng Physick Foundation, with an endowment of $500,000, as an adjunct of the Department of Surgery. Physick, the father of American surgery, was the first Professor of Surgery at the University of Pennsylvania, and when the chair of surgery was established at the University in 1805, was the only man in the country to occupy a chair independent of anatomy and devoted to surgery exclusively.

BOOKS RECEIVED

Annual Reports 1926. U. S. Public Health Service. Washington: Government Printing Office, 1926.

Report of the Department of Health of the City of Chicago. For the years 1923, 1924, and 1925. By Herman N. Bundesen, M.D., Commissioner of Health, Chicago, 1926.

The Conquest of Disease. By Thurman B. Rice, A.M., M.D., Assistant Professor of Sanitary Science, Indiana University School of Medicine. New York: The Macmillan Company, 1927. Price, $4.50.

Transfusion of Blood. By Henry M. Feinblatt, M.D., Assistant Clinical Professor of Medicine, The Long Island College Hospital, Brooklyn, N. Y. Illustrated by 24 engravings. New York: The Macmillan Company, 1926.

Local Immunization. By A. Besredka, Pasteur Institute. Translated by Harry Plotz, M.D., Pasteur Institute. Authorized American edition presents a new and revolutionary idea of immunity. Price, $3.50. Baltimore: The Williams & Wilkins Company.

Actions and Uses of the Salicylates and Cinchophen in Medicine. By P. J. Hanzlik, M.D., Professor of Pharmacology, Stanford University School of Medicine, San Francisco, Calif. Medicine Monographs, Vol. IX. Baltimore: The Williams & Wilkins Co., 1927. Price, $3.50.

The Specialties in General Practice. Compiled by Francis W. Palfrey, M.D., Instructor in Medicine at Harvard University, in collaboration with 14 other teachers of the Harvard Medical School. Octavo of 748 pages. Philadelphia and London: W. B. Saunders Company, 1927. Price, cloth, $6.50 net.

A Manual of Pharmacology; Its Application to Therapeutics and Toxicology. By Torald Sollmann, M.D., Professor of Pharmacology and Materia Medica in the School of Medicine of Western Reserve University, Cleveland. Third edition, entirely reset. 1184 pages. Philadelphia and London: W. B. Saunders Company, 1926. Price, cloth, $7.50 net.

The Surgical Clinics of North America (issued serially, one number every other month). Volume VI, number VI. (New Jersey Number—December, 1926). 318 pages, with 93 illustrations and complete index to Volume VI. Per clinic year (February, 1926, to December, 1926), paper $12; cloth $16 net. Philadelphia and London: W. B. Saunders Company.

General Surgery. By Evarts A. Graham, A.B., M.D., Professor of Surgery, Washington University School of Medicine. This volume is one of a series of eight year books published under the general editorial charge of Charles L. Mix, A.M., M.D. They cover the entire field of recent medicine and surgery. Chicago: The Year Book Publishers, 304 S. Dearborn St. Price of this volume $3; of the series of eight volumes $15.

BOOK REVIEWS

From a reviewer we expect information and advice which will guide us safely and to our profit, warning us of the poor, the mediocre, the commonplace, and inviting our attention to merit.

THE PRACTICE OF MEDICINE. By A. A. Stevens, A.M., M.D., Professor of Applied Therapeutics in the University of Pennsylvania, Philadelphia; Visiting Physician to Philadelphia General Hospital; Consulting Physician to St. Agnes' Hospital, Philadelphia. Second edition, entirely reset. Philadelphia and London: W. B. Saunders Company, 1926. 1174 pages.

This book is an authority on the practice of medicine, and will meet the needs of the general practitioner who desires information upon any ordinary subject, together with amplified outlines of treatment which are very authoritative. Dr. Stevens's rich experience at "Blockley" covering many years as visiting physician and teacher has given him a wealth of information that is recorded in systematic manner.

The author follows the stereotyped path of many who still prescribe potassium iodid instead of other salts which are equally efficacious and not so irritating to the gastric mucous membrane.

The book is of practical value to the medical student as the entire work follows the conversational style of record.

THE PROSTATE GLAND. By Chester Tilton Stone, M.D., formerly of Urological Staff, St. Luke's Hospital, Woman's Hospital, Postgraduate Hospital, New York City. Illustrated with two drawings by the author. New York: Allen Ross & Co., 1133 Broadway. Price, $1.50 net.

As stated in the preface, "this brief treatise is written for those who suffer from prostatic disorders about which the average layman has little accurate knowledge." There are times when the physician is asked by the laity to recommend a book on this or that. To meet these various demands, books have been written by physicians upon medical topics for the layman. The prostate gland is a very important factor in the male economy. This book may safely be recommended by the physician to the layman.

LIFE INSURANCE MEDICINE. A study of some of its problems and their relation to clinical medicine. By members of the medical department of the New England Mutual Life Insurance Company. Volume I, 219 pages. Published by New England Mutual Life Insurance Company, 87 Milk Street, Boston, Mass., 1926.

This work is of special importance to physicians who are interested in life insurance and statistical studies. McCrudden's article on glycosuria covers eighty pages, and represents a well-balanced study of this subject. The records presented may be accepted as being authoritative.

THE ROCKEFELLER FOUNDATION. Annual Report, 1925. 521 pages. Published by the Rockefeller Foundation, 61 Broadway, New York City.

This report is of much importance to public-health officials and medical colleges in offering suggestions as to the scope of training for both medical students and the laity in regard to preventive medicine in particular, and to hygiene, sanitation, and public-health work in general. There is much food for thought in the reports submitted, and the volume is well worthy of a place in any reference library.

CAVERNOUS SINUS THROMBOPHLEBITIS and Allied Septic and Traumatic Lesions of the Basal Venous Sinuses. A Clinical Study of Blood-Stream Infection. By Wells P. Eagleton, M.D. New York: The Macmillan Company, 1926.

This book is primarily a study of twenty-five personally observed cases of cavernous-sinus thrombophlebitis,

with twenty-one deaths, twelve autopsy reports, and four recoveries.

As Dr. Eagleton says, for early diagnosis of cavernous cases, it must be appreciated that the classical symptoms of exophthalmos, edema of the lids, and chemosis may or may not be present, depending on whether the sinus is suddenly and completely obstructed by an acute septic process, or gradually obliterated by a compensatory thrombus. It is necessary to treat these cases not only by drainage, but by placing the inflamed venous radicle at rest by ligation of the common or internal carotid artery.

Other cases are also cited. Allied septic and traumatic lesions of the basal venous sinuses, and a clinical study of blood-stream infection are thoroughly discussed. The cases are clearly analyzed, and much valuable information is given in this little book. There is a general bibliography, an index of authors, and an index of subjects.

Dr. Eagleton writes sincerely, with the driving force of profound conviction.

THE THYROID GLAND. By Charles H. Mayo, Professor of Surgery, and Henry H. Plummer, Professor of Medicine, in the University of Minnesota, Rochester, Minn. C. V. Mosby Co., St. Louis, Mo., 1926. Cloth, 83 pages. Price, $1.75.

This little book, though entitled "The Thyroid Gland," is in reality devoted almost entirely to the study of the various forms of goiter, the physiology of the gland and of the parathyroids occupying a relatively small amount of space. The reader, therefore, will find it far more readable than its title would imply. That the deductions vouchsafed are based on a study, during the last thirty-three years, of 22,728 cases of thyroid disease at the Mayo Clinic, affords an estimate of the vast field covered.

The subject matter is eminently suited, however, for the surgical field alone. Its aim is mainly to emphasize the decided advantages of the preoperative use of Lugol's solution. This measure, introduced by Plummer in 1922, is stated to have decreased the surgical mortality in the Mayo Clinic from approximately 3.5 per cent to about 1 per cent. The most satisfactory result of iodin therapy, according to the authors, has perhaps been the control of what they term the "recurrent manifestations" of the disease, or continuation of its symptoms, the nervous, cardiac, and other phenomena after operative procedures.

The authors support the two-product theory as a cause of the thyrotoxic phenomena of hyperthyroidism. It must be said, however, that their arguments are not convincing. Nor is it shown that thyroidectomy even preceded by the iodin treatment will prevent recurrences after a period of years. Former follow-up studies had shown that the "cured" cases operated upon at the Mayo Clinic had dwindled down to 45 per cent after eight years. Whether Plummer's preoperative iodin treatment will raise this proportion remains, therefore, to be seen. The measure would appear, however, to reduce materially the postoperative deaths from crises, infectious processes, such as pneumonia, endocarditis, etc. This is without doubt a valuable contribution.

HUMAN PATHOLOGY. A textbook by Howard T. Karsner, M.D., Professor of Pathology, School of Medicine, Western Reserve University, Cleveland, Ohio. Philadelphia: J. B. Lippincott Co., 1926. Price, $10.

This volume of 947 pages, with 433 illustrations, is an excellent book for the use of students of medicine and others interested in the main facts of pathology.

It presents the subject according to the time-honored plan of dividing it into two parts, "General" and "Systemic," with descriptions and discussions arranged in the conventional manner and treated with about the customary amount of space. It is, therefore, not only a standard work, but a *standardized* one, according to the present pernicious custom of standardizing everything that is produced in America.

This criticism is not directed at Professor Karsner, who undoubtedly has done remarkably well in his part of the work, but at the publisher who, yielding to the tendency of the times to view all commercial products—merchandise generally, books in particular, and medical students, if possible—from the viewpoint of uniformity and quantity production, no doubt surrounded the author by restrictions and requirements that deprived his product of nearly all originality, and caused him simply to add another to the list of similar books. We regret this exceedingly, for we know Professor Karsner to be a capable, versatile, and original man, whose early vision must have contemplated a very different book from his finished product. We have similarly suffered at the hands of publishers, and can sympathize with him at the same time that we congratulate him upon having done as well as he has.

We think him unfortunate in having made use of another's illustrations, not that they are not for the most part good and truly illustrative, but because they were made a generation ago, belong to a style of that period, and give the new book a somewhat "old-fashioned" appearance.

But, all this aside, it is a good book, and in the numerous tests to which we have subjected it, is accurate, up-to-date, and adequate for all the uses to which the student can put it. It is also written in a pleasing and fluent diction that tends to make a prosy subject entertaining, and communicates to the reader no inconsiderable part of the author's enthusiasm concerning the subjects about which he writes.

GENERAL MEDICINE. Practical Medicine Series, 1926, by Drs. Geo. H. Weaver, Lawrason Brown, Robert B. Preble, and Ralph C. Brown. The Year Book Publishers, Chicago, Ill.

This review is divided into several parts—one on infectious diseases and endocrinology, one on diseases of the blood and blood-making organs, and diseases of the blood vessels, heart, and kidney; another on diseases of the digestive system and metabolism. Under each division there is an efficient review of the best literature which has appeared during the year prior to the publication. The work is of the greatest value to the busy practitioner who does not have time to follow the run of medical journals.

MODERN CLINICAL SYPHILOLOGY. By John H. Stokes, M.D., Professor of Dermatology and Syphilology in the School of Medicine, University of Pennsylvania, etc. Octavo of 1,144 pages with 885 illustrations and text figures and more than 200 detailed case histories. Philadelphia and London: W. B. Saunders Company, 1926, cloth $12 net.

There has long been need for a volume on syphilis that embraces a complete clinical presentation of the disease and the increasing complexity of its modern therapy. Stokes's volume admirably fulfills this need.

The first four chapters concern a general consideration of syphilis, from the pathology, through the clinical approach to and physical examination for syphilis, and fundamental diagnostic tests, leading up to treatment of syphilis. The following seven chapters concern a thorough discussion of the treatment of the disease—the status of mercury, bismuth iodids, and the arsphenamins; clinical reactions; complications; and contraindications. Technical methods in the administration of these drugs is considered in detail. The diagnosis and treatment of early syphilis are considered in the next three chapters. The following seven chapters are a thorough presentation and discussion of later syphilis—the skin and mucous membranes, skeletal system, gastrointestinal tract, liver and spleen, cardiovascular system, and heredosyphilis. One chapter is devoted to the less common manifestations of syphilis, and the final chapter to public and social aspects of syphilis.

The colossal amount of material utilized in writing the book is in the most part from the Mayo Clinic. The case records are presented in table form with an

(Concluded on page xvi.)

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TULAREMIA*

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Definition. Tularemia‡ is an infectious disease caused by Bacterium tularense. Primarily it occurs in nature as a fatal bacteremia of wild rodents, especially rabbits and hares. Secondarily it is a disease of man, transmitted from rodents to man by the bite of an infected blood-sucking fly or tick, or by contamination of his hands or his conjunctival sac with portions of the internal organs or with the body fluids of infected rodents, flies, or ticks.

Geographic distribution. Naturally infected human cases have been reported from Washington, D. C., and from thirty-four states of the United States extending from the Atlantic to the Pacific coast and from the Canadian to the Mexican border. Twenty-five states were added to the list in 1925 and 1926. Although the disease has been known to exist in the ground squirrels of California since 1911, no human case has been reported from California except laboratory infections of man. The disease was recognized in Japan in 1925.

Zoölogic distribution in nature. (1) Ground squirrels, (2) wild rabbits and hares, and (3) wild rats, have been found infected in nature with Bacterium tularense.

(1) The California ground squirrel, Citellus beecheyi, Richardson, was the animal in which McCoy discovered the disease in 1911. His original description was based on a study of thirty-two naturally infected ground squirrels.

(2) Wild rabbits and hares. Cottontail rabbits (Sylvilagus), jack rabbits (Lepus), and snowshoe rabbits (Lepus bairdi) constitute the great reservoir of infection. Wherry and Lamb cultured tularense from guinea pigs which had been inoculated from two wild cottontail rabbits found dead in southern Indiana. Francis cultured tularense from guinea pigs which had been inoculated with (a) the spleens of seventeen jack rabbits shot or found dead in Utah, (b) the spleen of a snowshoe rabbit found sick in Montana, and (c) the livers of ten cottontail rabbits bought in the Washington, D. C., market. Numerous observers have reported sick and dead rabbits in communities where human cases of tularemia were occurring. Numerous cases of tularemia have been reported in persons who had dressed wild rabbits only a very few days previous to illness.

Ohara in 1925 reported a fatal disease of wild rabbits in Japan. The heart of a rabbit found dead was used by him to inoculate a volunteer human subject, who contracted tularemia.

Domestic rabbits raised in rabbitries and sold for food or for laboratory purposes or to fanciers have never been found naturally infected.

(3) Wild rats. Dieter and Rhodes, in 1925, while engaged in the routine examination of rats for plague in Los Angeles, California, cultured three strains of Bacterium tularense from guinea pigs into which they had inoculated the tissues of wild rats which had been trapped in the city of Los Angeles. This is the only record of having found the infection in wild rats.

Transmission to man. Transmission of tularemia to man occurs (1) by the bite of the horse fly, Chrysops discalis; (2) by the bite of the wood tick, Dermacentor andersoni Stiles; and (3) by contamination of his hands or his conjunctival sac with portions of the internal organs or with the body fluids of infected rabbits, flies, or ticks.

In addition, one case in Montana followed the bite of a coyote (Canis lestes); another case in the same state followed the bite of a ground squirrel (Citellus Richardsoni); a case in Iowa followed the bite of a hog (Sus scrofa domestica). Presumably the mouth parts of the coyote, ground squirrel, and hog were contaminated by infected rabbits which they had eaten, because dead rabbits were found near by, readily accessible. There is no report of transmis-

*Read before the Section on Medicine of the Medical Society of the State of Pennsylvania, Philadelphia Session, October 14, 1926.

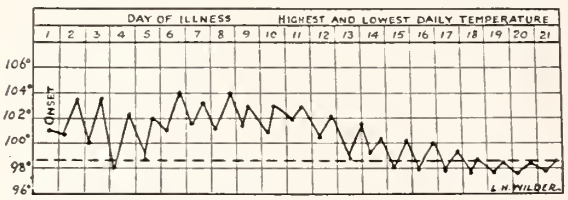
†Surgeon, United States Public Health Service.

‡The disease was named tularemia by Francis in 1921 on account of the presence in the blood of the causative microörganism. This organism was discovered by McCoy and Chapin in 1912 in ground squirrels which came principally from Tulare County, California. The region of Tulare County was in previous years called Tulares by the Spaniards because that area was covered by extensive marshy beds of the reed tule (Aztec)—a variety of large bulrush.

sion from ground squirrels or rats to man. The only record of the transfers of infection from man to man is in a case report by Harris in which a mother is believed to have contracted tularemia through a prick of her thumb received while dressing the ulcer on her fly-bitten son.

(1) Flies of the species Chrysops discalis Williston are blood-sucking flies commonly found on horses and cattle, but they also bite rabbits and man. Having fed on an infected rabbit they readily infect man at the next feeding, presumably transmitting the infection mechanically by their contaminated mouth parts. These flies are found principally in Utah and in the adjacent states.

(2) Wood ticks of the species Dermacentor andersoni not only transmit the infection from rabbits to man, but, because of hereditary transmission of infection through their eggs to the next generation these ticks must be considered as a permanent reservoir of infection. There is a wide distribution of infection throughout their bodies—in the lumen of the gut, in the cells of



HUMAN CASE OF TULARAEMIA (LABORATORY INFECTION)

the gut wall, in their circulatory fluid, and in their feces. They carry the infection over winter, and harbor it throughout their lives. They are ideal transmitters of infection. These ticks are found principally in Montana and in the adjacent states.

(3) Contamination or self-inoculation has caused most of the human cases. The specific acts by which man inoculates himself are the following: A market man skins and dresses rabbits for his patrons. A housewife, servant, or cook dresses rabbits for the table. A hunter dresses rabbits at the end of a day's hunt. A farmer pulls infected ticks from his horse or cow and then touches his eyes. Jack rabbits are skinned and cut up for fish bait, coyote bait, chicken feed, hog feed, dog feed, for the table, and for the market. Persons who have become infected in the laboratory have either performed or assisted at necropsies of infected guinea pigs, rabbits, or white mice, or have held infected living rabbits or guinea pigs, or have handled infected living ticks.

Transmission among wild rabbits. Blood-sucking insects—lice, flies, and ticks—are believed to transmit the infection from rabbit to rabbit in nature, thus contributing to the maintenance of infection throughout all months of the year, and perennially.

Seasonal incidence. (1) Ticks and (2) flies have a seasonal prevalence, and (3) rabbits are protected by law in certain months, all of which contributes to the seasonal incidence of human cases. In every month of the year naturally infected human cases have occurred. Laboratory infections of man are without seasonal incidence.

(1) Ticks. March, April, May, June, and July are the months recorded for the onset of cases due to tick bites. These months correspond to the season of greatest activity of Dermacentor andersoni.

(2) Flies. June, July, August, and September are the months recorded for the onset of cases due to fly bites. These months correspond to the season of greatest activity of Chrysops discalis.

(3) Rabbits. In November, December, and January it is generally permitted to hunt cottontail rabbits east of the Mississippi River, and these rabbits are then offered for sale in large numbers in the markets. Consequently, human cases east of the Mississippi River have occurred in greatest number during the months enumerated. Jack rabbits are found almost exclusively west of the Mississippi River, and no laws prohibit their destruction because they are a pest. Human cases caused by dissection of jack rabbits have occurred in April, May, June, July, August, September, and October—months entirely different from those enumerated for cases east of the Mississippi River.

Occupation, sex, age, color. Farmers and their families furnish the largest number of cases because their occupation exposes them to ticks, flies, and wild rabbits. Market men, market women, housewives, and cooks furnish the second largest group of cases. Hunters and laboratory workers constitute large groups. Single cases have occurred in several professions and occupations. There were 235 males and 76 females. The oldest was 73 years of age, and the youngest was 2 years. In a series of 323 cases, only 18 were negroes.

Bacteriology. Bacterium tularense is a small, pleomorphic organism, Gram-negative, nonmotile, and non-spore-bearing. It grows only under aërobic conditions. Its optimum temperature is 37°C., and its optimum ^{P}H range between 6.8 and 7.3. It ferments glucose, levulose, mannose, and glycerol, forming acid but not gas. It grows well on coagulated egg yolk and blood glucose cystin agar, but not on ordinary laboratory media such as plain agar, plain bouillon,

gelatin, potato, and milk. Bacillary, coccoidal, and bipolar forms are noted.

Heat. A temperature of 56 to 58°C. kills the organism in cultures and in spleen tissue in ten minutes. Cooking renders infected tissue harmless.

Formalin. Cultures suspended in saline solution containing 0.1 per cent of formalin (37 per cent strength) are rendered nonvirulent after 24 hours.

Trikresol. Spleen tissue, rubbed up in 1 per cent trikresol, was free from infection after 2 minutes.

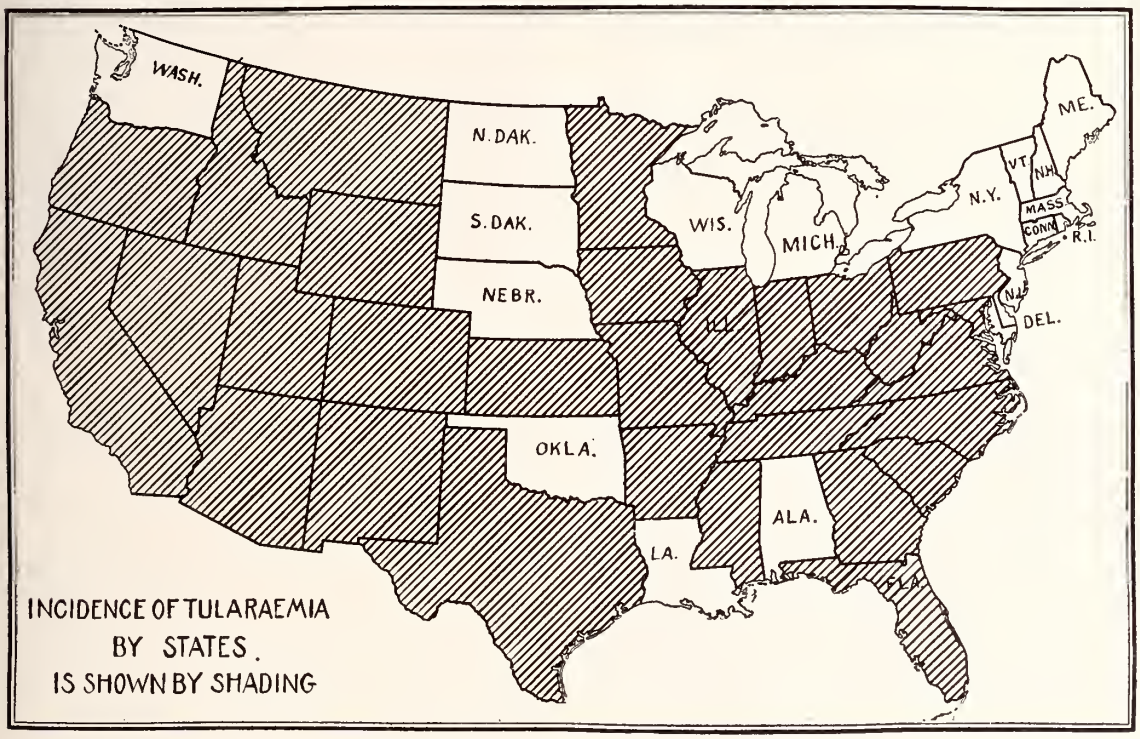
Bacteremia. The isolation of cultures from the blood of man during the first week of illness indicates that in man there is a bacteremia early in the disease.

Rabbits, guinea pigs, and white mice dying acutely from the infection often manifest a bacteremia so great that .000,000,01 c.c. of their heart blood, when injected into a fresh animal, kills acutely with typical lesions of the disease.

The cœlomic fluid of the tick and bed bug is rich in microörganisms.

Sources of human infection. (1) In 240 cases of the ulceroglandular type, 20 of the patients were fly-bitten, 21 were tick-bitten, 46 had dressed rabbits which they had sold in the market, 25 had dressed rabbits which they had bought in the market, 55 had dressed rabbits which they had shot or killed, 33 had dissected jack rabbits for food for animals, 26 had dressed rabbits, the source of which was not stated, 1 was bitten by a coyote, 1 was bitten by a ground squirrel, 1 was bitten by a hog, 2 were bitten by an insect (species not determined), 6 were associated with sheep and consequently with ticks, and 3 were without definite knowledge as to the source of infection, but they were residents of infected territory. Presumably the mouth parts of the coyote, ground squirrel, and hog were contaminated with infection, because dead rabbits were found near by and freely accessible to them.

(2) Of 23 cases of the oculoglandular type, 16 had skinned or dressed wild rabbits, 5 had removed ticks from a horse or cow and had crushed them with their fingers, and 1 had crushed a fly with his fingers. Presumably all had transferred the infection to their eyes with their fingers.



(3) Of 11 cases of the purely glandular type, 7 were Japanese cases. All had dressed rabbits and all had enlargements of epitrochlear or axillary glands, but none had a lesion on the hands indicating where the infection penetrated the skin.

(4) Of 21 cases of the typhoidal type, 18 were laboratory workers who had either performed or assisted at necropsies of infected guinea pigs, rabbits, or white mice, or had held infected living rabbits or guinea pigs, or had handled infected living ticks; 2 had dressed rabbits in the market; one probably derived his infection from ticks.

How the infection gained entrance to the body in laboratory workers is unknown. Whether it penetrated the skin of the hands without leaving a local lesion, or whether, after contamination of the fingers, the infection was conveyed to the conjunctival sac or to the mouth and swallowed, or whether it was conveyed as a droplet infection remains undetermined. There is little evidence to support any view.

Noncontagiousness. No instance has been reported of the spread of the infection from man to man by mere contact or by the bite of insects which have previously bitten a patient. Surgeons who have incised or excised suppurating glands have not contracted the infection.

Pathology in man. Subacuteness approaching chronicity characterizes the lesions in man. This applies to the primary ulcer at the site of infection, to the regional lymph glands which drain the site of infection, to the subcutaneous nodules in the course of the lymphatics lying between the ulcer and the glands, and to the internal organs, spleen, liver, lungs, and adrenals.

In microscopic sections, areas of focal necrosis are seen which show a central caseous zone surrounded by a layer of epithelioid cells and fibroblasts in radial arrangement, and a peripheral zone of lymphocytes, among which are a few giant cells. Bacterium tularense has not been stained in sections of human lesions.

The granulomatous type of the human lesions corresponds to the subacute clinical course typical of the disease in man.

Pathologists, unfamiliar with the lesions in man, have tenaciously clung to the diagnosis of tuberculosis until forced to give it up by their failure to demonstrate acid-fast microörganisms or to infect guinea pigs. In such cases the rabbit history and serum agglutination have proved the diagnosis of tularemia.

Clinical types. In studying 323 case reports, four clinical types are noted: (1) Ulceroglandular, the primary lesion being a papule, later an ulcer of the skin, and accompanied by enlargement of the regional lymph glands. (2) Oculoglandular, the primary lesion being a conjunctivitis and accompanied by enlargement of the regional lymph glands. Fulminant cases, running a rapid course, with death, have been noted in the oculoglandular type. (3) Glandular, without primary lesion, but with enlargement of the regional lymph glands. (4) Typhoidal, without primary lesion and without glandular enlargements.

Symptoms and course. Incubation. The period of incubation has been definitely determined in 140 cases in which there was a single exposure to infection. In these there was a period of 24 hours in 13 cases, 2 days in 31 cases, 3 days in 45 cases, 4 days in 22 cases, 5 days in 15 cases, 6 days in 7 cases, 8 days in 1 case, and 9 days in 1 case, the average being slightly more than 3 days. In laboratory workers and market men daily exposed to infection the incubation period could not be determined.

Onset. The onset is sudden, often occurring while the patient is at work, and is manifested characteristically by headache, vomiting, chilliness, chills, aching bodily pains, sweating, prostration, and fever.

Ulceroglandular type. These patients complain, within 48 hours after the onset, of pain in the area of the lymph glands which drain the site of infection. On examination, these glands are found to be tender and slightly enlarged. Only the regional glands are involved and not those of other parts of the body. The glandular pain precedes by about 24 hours any definite reference by the patient to the site of infection, which then becomes manifest as a painful, swollen, inflamed papule which breaks down, liberating a necrotic core or plug and leaving an ulcer about three eighths of an inch in diameter, with raised edges, and having a punched-out appearance. On healing, the ulcer is replaced by scar tissue.

There is redness of the skin overlying the enlarged and tender lymph glands, and this redness may be continuous to the site of infection, or red streaks may be visible on an extremity. In about half of the cases the lymph glands proceed to suppuration, and after the inflammation has subsided an abscess ruptures through a soft, thin spot in the skin. In the other half of the cases the glands do not break down, but remain hard, palpable, and rather tender for two or three months, gradually returning to normal. Lymph glands other than the regional glands were slightly enlarged and tender in certain cases.

Subcutaneous nodules simulating sporotrichosis were noted on the forearm and arm in 33 cases. They were distributed not only along the vessels on the anterior surface but also over the posterior surface of the forearm or arm, and extended from the ulcer on the fingers to the enlarged axillary glands. The nodules were firm and movable, but most of them ultimately suppurated. They varied in size from that of a pea to 1.0 cm. in diameter, and in number they varied from two to thirty.

Weakness, loss of weight, recurring chills, sweats, and prostration are often noted during the active stage of the disease, which lasts from two to three weeks.

Oculoglandular type. These cases follow the general description given above, but with pri-



Fig. 1. Tularemia. Ulcer of cheek following bite of insect (species undetermined). Enlarged cervical glands. Case A. L., 14 days after onset of illness. Drs. W. L. Brown and C. P. Brown, El Paso, Texas.

mary localization in the conjunctival sac instead of the skin. Of 22 cases, 19 had unilateral involvement of eye and glands, 8 being right-sided and 11 being left-sided; 3 had simultaneous bilateral involvement of the eyes and glands. In the early stage the eye manifests irritation, weeping, swelling of the lids and surrounding tissues, edema of the ocular conjunctiva, and usually a papule on the conjunctiva of the lower lid. At the same time there are swelling, tenderness, and pain in some of the following lymph glands: preauricular, parotid, submaxillary, anterior cervical, and, in severe cases, in the axillary group. Small, discrete ulcers appear very soon on the conjunctivæ of both lids. The constitutional reaction is manifested by fever, chills, sweating, prostration, and, in severe cases, by convulsions, delirium, and stupor. A purulent dacryocystitis was noted in two cases. In half of the cases the glands suppurated. No involvement of the sinuses was noted.

Permanent impairment of vision was noted in only one case, which proceeded to blindness of the affected eye following a perforation of the cornea, protrusion of the iris, and fusion of the cornea and iris into a compact mass.

Fulminant cases have been recognized only once, and even in this instance the nature of the illness almost escaped recognition. The outbreak comprised four members of a family who became ill within a 24-hour period. The cases were of the oculoglandular type, the symptoms being bilateral in the three who died, but unilateral in the fourth, who survived. Death occurred on the 6th, 8th, and 8th day of illness, respectively. The infection seemed to have been derived from wild cottontail rabbits which the family were in the habit of eating frequently. Tularemia was demonstrated by animal inoculation and by cultural and serologic methods in the survivor, but in the three who died, laboratory tests were not made either before or after death, owing to the failure of the attending physician to recognize the condition.

Glandular type. These are cases which, after dressing rabbits, develop enlarged epitrochlear and axillary glands, but which manifest no lesions on the hands.

Typhoidal type. In this type, fever was the only outstanding symptom. For want of a better diagnosis, attending physicians in these cases have inclined to the diagnosis of typhoid until compelled to give it up by reason of a negative Widal reaction and a positive agglutination of Bacterium tularense. The onset and duration of the disease in this type is the same as in the glandular types.



Fig. 2. Tularemia. Primary lesion of finger. Enlarged axillary gland. Case L. N. Taken 25 days after onset. Dr. Henry Albert, Reno, Nevada.

Fever is always present in cases of tularemia. Complete temperature records are available only for the laboratory cases, and of these charts there are 11. Viewing the 11 charts one is struck at a glance by the constancy of the sequence of initial rise, remission, and secondary rise. Following the initial fever which lasts one, two, or three days, there is a remission of temperature for one, two, or three days; this is followed by a secondary rise to the original height, after which there is a gradual decline to normal, the whole febrile period lasting from two to three weeks. The early remission of temperature is accompanied by a diminution of all symptoms, and the patient wants to leave the hospital for his home or return to work, but symptoms return again with the secondary rise of temperature.

Leukocytosis. The white-cell count is moderately increased and may reach 14,000, but is not of diagnostic value.

Skin eruption. A very definite skin eruption was noted in 12 cases, and was macular, papular, or pustular.

Convalescence is slow. It is rare for a patient to be at work again at the end of a month. Usually the second month is spent lying about the house owing to weakness on exertion, and during the third month only half-time work is performed. Some have not entirely returned to normal for six months or even a year. Suppuration of lymph glands has been noted ten months after the onset of the disease.

Relapses of fever lasting six and eight days occurred in two laboratory cases after ten and eight months, respectively. Recurring mild attacks of fever have been noted.

Recovery usually occurs without evident sequelæ. Death is rare, and yet of 7 cases which I studied in Utah, one patient who was fly-bitten on the right side of the neck died on the twenty-sixth day of illness with a complicating pneumonia of the right upper lobe. Of 10 cases reported by Anderson from Carlsbad, New Mexico, one patient who, previous to and during his attack of tularemia, had a chronic heart lesion, died at about the fourth week of illness. In one case reported by Verbrycke from Washington, D. C., the patient died on the eighteenth day of illness and on the seventh day after an exploratory abdominal incision. One case reported by Rutledge died on the fourteenth day. Of four cases occurring in one family at the same time, 3 patients died (see fulminant cases under oculoglandular type).

Diagnosis. Because tularemia was not borne in mind, the disease has been erroneously diagnosed as follows: (1) Clinicians have called it "flu," septic infection, typhoid fever, and sporotrichosis. (2) Serologists have called it undulant fever on account of the cross-agglutination of melitensis and abortus. (3) Pathologists have called it tuberculosis on account of the lesions in the lymph glands.

The clinician who bears in mind the following tetrad will seldom fail to diagnose a case of tularemia: (1) a history of having dressed or dissected a wild rabbit, or of being tick-bitten or fly-bitten; (2) a primary lesion of the skin in the form of a papule, followed by a persistent ulcer or a primary conjunctivitis, followed often by ulcers of the conjunctiva; (3) persistent glandular enlargements in the region draining the primary lesion; and (4) fever of from two to three weeks' duration.

Having recognized this tetrad in his patient, the clinician will prove his diagnosis (1) by obtaining an agglutination of Bacterium tularense by blood serum collected in the second week of illness and noting an increase in the agglutinin titre in serum collected a few days later or in the third week, or (2) by isolation of Bacterium tularense from guinea pigs inoculated with material taken as early as the first week from the primary lesion or from the enlarged glands or the blood of the patient. Microscopic examination of cover-glass preparations and cultures taken direct from the patient is useless.

Agglutination. A study of the blood serums of 289 cases of tularemia tested for agglutination of Bacterium tularense shows (1) a complete absence of agglutinins for tularense in the first week of illness; (2) the constant presence of agglutinins in the second week; (3) an abrupt rise in titre in the third week, reaching its maximum in the fourth, fifth, sixth, or seventh week; (4) a fall in titre in the eighth week; (5) a gradual decline thereafter until at the end of the first year the average titre of 17 cases was 1:136; (6) a persistence of agglutinins in



Fig. 3. Tularemia. Ulcer of finger after dressing a market rabbit. Case R. T. Drs. G. T. Brown and O. B. Hunter, Washington, D. C.



Fig. 4. Tularemia. Liver of rabbit (from collection of the Army Medical Museum).

long-recovered cases; and (7) the failure of agglutinins entirely to disappear in any case, even 10, 14, and 18 years after recovery.

Cross-agglutination. Human tularemia serums may show cross-agglutination of abortus (the cause of contagious abortion of animals) and melitensis (the cause of undulant fever). No serum with a tularense titre less than 320 gave cross-agglutination of abortus or melitensis. Of serums showing antitularense titres of 320, 640, 1280, or 2560, the number which gave cross-agglutination of abortus and melitensis was 42, while the number which gave no cross-agglutination was 41, thus showing a failure of high-titre serums consistently to show cross-agglutination. As a rule, a tularemia serum agglutinated tularense in much higher dilution than it agglutinated abortus or melitensis. Exceptions to that rule were noted in five tularense serums which agglutinated tularense, abortus, and melitensis to the same, or to nearly the same, degree.

The significance of these observations, from the viewpoint of diagnosis, is that a suspected tularemia serum should be tested, not only for agglutination of tularense but also for agglutination of either abortus or melitensis unless the clinical history points clearly to the etiology. It has been established by Evans that a serum which agglutinates one of the latter two organisms will also agglutinate the other.

Isolation of culture from man. Bacterium tularense has not been isolated directly from man by inoculation of culture mediums, nor has the organism been identified in cover-glass preparations made direct from man. Human tissue is first inoculated into guinea pigs or rabbits; culture mediums are inoculated from these animals.

Animal inoculations. Pus from the site of the fly bite, or tick bite, or conjunctiva, or from other sites of infection, or from the patient's suppurating glands, or tissue from a wild rabbit's spotted spleen or liver should be injected subcutaneously on the abdomen of guinea pigs or rabbits. Such material should first be rubbed in a mortar, suspended in salt solution, and strained through coarse gauze. Blood drawn from the patient's median basilic vein is defibrinated, mixed with an equal volume of normal saline solution, and injected intraperitoneally into guinea pigs. Each guinea pig should receive 4 to 8 c.c. of the diluted blood.

Within a week the animals should die, presenting a gray, granular caseation of the enlarged lymph glands and great numbers of small white foci of necrosis studded over the enlarged spleen especially, and over the liver. The organs should be viewed in direct sunlight, or in strong electric light, because the lesions are often minute. The use of a hand lens may be necessary. In the absence of apparent lesions, the death of the animal is sufficient incentive for transfer to a fresh animal.

Material from the dead animal's glands, spleen, and liver, when rubbed on the shaven, abraded skin of another guinea pig or rabbit, should likewise cause its death within a week with the same typical lesions of the lymph glands, spleen, and liver, and thus the infection may be propagated for an indefinite number of passages through guinea pigs or rabbits.

Cultures of Bacterium tularense may be obtained by inoculations of the blood, spleen, or



Fig. 5. Tularemia. Spleen of rabbit (from collection of the Army Medical Museum).

liver of these animals to coagulated egg yolk or blood glucose cystine agar.

More reliance should be placed on the gross pathologic evidence of the disease in guinea pigs, rabbits, and mice than on cover-glass preparations made from these animals.

Spleens of infected guinea pigs or rabbits, if dropped into pure glycerol and placed in the ice box will remain virulent for at least a month, thus affording a means of shipping live virus for identification.

Duration of infection in man. Cultures were obtained from fifteen human patients by guinea-pig inoculation as follows: (1) From

blood taken from 2 patients on the third and sixth days respectively. Blood taken after the second week was always negative. (2) From conjunctival scrapings taken from 4 patients on the fourth, thirteenth, thirteenth, and seventeenth days respectively. (3) From pus from the nose taken on the eighth day. (4) From lymph glands of 6 patients taken on the tenth, twelfth, fourteenth, fourteenth, sixteenth, and seventeenth days respectively. (5) From the primary lesion on the finger taken on the eighth day. (6) From spleen taken at necropsy on the eighteenth and twenty-sixth days, and from blood taken after death, from a brachial vein, on the fourteenth day.

Numerous attempts have been made to recover the infection from the pus of lymph glands after the first month of illness, but all were negative.

Immunity. One attack confers immunity in man. No instance of a second attack has been recorded by practicing physicians, two of whom have observed about two hundred cases. Market men who dress rabbits year after year have had only one attack. The long persistence of agglutinins in the blood of recovered patients may be an indication of their immunity.

Susceptible laboratory animals (guinea pigs, rabbits, and white mice) have exhibited no evidence of immunity to virulent infection in our laboratory. All have died with the single exception of one rabbit, which survived a severe acute attack. Thirty-five days following the onset of his attack, he was inoculated subcutaneously with a million fatal doses of a virulent culture and remained well for twenty-one months.

Susceptibility. Degrees of susceptibility are noted as follows: (1) High susceptibility in man, monkey, ground squirrels, rabbits, guinea pigs, mice, woodchucks, opossums, and young coyotes; (2) slight susceptibility in rats, cats, sheep, and goats; (3) nonsusceptibility in horses, cattle, hogs, dogs, pigeons, and chickens.

Unique features. The following outstanding features of tularemia deserve special mention: (1) The certainty of infection of laboratory workers. (2) The persistence of agglutinins in the blood of long-recovered cases. (3) The cross-agglutination of abortus and melitensis. (4) The granulomatous character of the lesions in man as contrasted with the lesions in animals. (5) The crystin requirement of the organism in culture medium. (6) Its pleomorphism. (7) Its penetration of the unbroken skin. (8) Its invasion of fixed tissue cells—the hepatic cells of a mouse and the intestinal epithelium of tick and bed bug. (9) Its hereditary transmission through the egg of the tick to the next generation of ticks. (10) The great variety of insect hosts. (11) The great variety of animal hosts.

Prevention. Thorough cooking destroys the infection in a rabbit, thus rendering an infected rabbit harmless for food.

Laboratory workers engaged in performing necropsies of infected animals should wear rubber gloves and should observe all other precautions to avoid infection. Cooks, market men, and hunters should wear rubber gloves in dressing rabbits.

Treatment. The treatment is symptomatic. Rest in bed is the most important. Those who have had the most experience with the enlarged glands do not advise excision, or even incision, until a very evident soft, thin place appears in the skin overlying the glands. No preventive vaccine or curative serum has yet been perfected.

Symposium on Periodic Health Examinations*

RESPONSIBILITY FOR LIFE EXTENSION

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A superficial review of the history of medicine reveals the early interest of mankind in sickness prevention and thereby the prolongation of life. The inoculation of young persons in good health with the virus of smallpox for the purpose of securing mildness of attack, and thereby survival and permanent exemption, was practiced in India and China almost three thousand years before Jenner discovered the preventive power of vaccination with cowpox virus. Early Greek physicians directed gymnastic and athletic activities which directly added to the life span of those participating.

Throughout the dark centuries of European warfare and ecclesiastical clashing that followed the initiation of the Christian era, there survived enough of medical tradition to react, weakly at least, to the stimulating interest once again taken by mankind early in the seventeenth century in the simple virtues of sobriety, cleanliness, and crude hygienic practices.

In the year 1693, Halley, a royal astronomer, struck by the enormous death losses from recurring epidemics of the "black plague" in the little town of Breslau, the only place that then recorded the ages of its dead, compiled the first mortality table. Probably the next great step in the development of the life-prolongation movement

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was the inauguration of the first rational, scientific plan of life insurance, in 1762. Mortality tables, underwriting experience, profit and loss, may sound like sordid steps to solving humanity's greatest problem, but they undoubtedly have led largely, amid the increasing complexities of modern social and industrial life, to the development of social and economic formulas, culminating in the demand for practical plans for extending the average span of human life.

Trained clinical observers, experienced in making deductions from the findings of physical examinations, and physicians with broad actuarial experience, have in recent years stressed the importance of periodic physical examinations of the apparently healthy in the recognition of early manifestations of degenerative diseases. Many laymen are alive to the great possibilities which may result from such examinations, and are seeking examinations by individual physicians. This public demand is being capitalized by organizations which offer for sale the services of examining physicians. The demand for recurring physical examinations will be met. Shall it be met by group methods, or as it properly should be—by competent individual medical practitioners?

The overwhelming part played by members of the medical profession in reducing morbidity and mortality from smallpox, yellow fever, malaria, tuberculosis, and the water-borne diseases may read like romance, but it will also serve to indict us before the court of public opinion if we fail to play our part in the prevention of diphtheria, scarlet fever, and the degenerative diseases.

Much of the progress in life extension made in the last fifty years has been in the practice of sickness prevention by mass methods. Drinking purified water and milk, for instance, prevents intestinal diseases, but requires no intelligent coöperation on the part of the citizens of modern municipalities. To overcome, however, by personal methods the apathy or disbelief of individuals in the preventability of many other diseases is directly the responsibility of the members of the medical profession. Since modern medical science so largely by mass methods saves from sickness and death so many younger individuals, it also accentuates the profession's responsibility to postpone, at least, the sickness and death from so-called degenerative diseases that is sure to come to the proportionately greater numbers who now survive infancy and youth, living into the late forties or early fifties. Lay education and periodic physical examinations of the apparently healthy individual are powerful weapons in postponing, at least, the development and fatal outcome of many disease states peculiar to adult and advanced years.

Educational efforts along these lines by medical and lay organizations are evident on every hand. Public opinion is behind the movement. Are the individual members of the medical profession sufficiently alert or equipped to do their share in creating, continuing, or meeting the demand for periodic examinations?

In the face of the mortality experience of life-insurance companies from tuberculosis in the last decade, no one can deny the value of prevention, early recognition, and proper treatment of the condition. Throughout the United States, in that period of time, the Metropolitan Life Insurance Company has experienced a reduction of approximately fifty per cent in its death losses from tuberculosis. The Standard Life Insurance Company, on business written in the State of Pennsylvania alone, for the five-year period ending 1919 paid twenty-six claims for deaths from tuberculosis, and in the six-year period ending 1925 but nine such claims.

Who can remember the indifference or open rebellion from members of our profession and from the public at large that met the demand thirty-five years ago, of Dr. Edward L. Trudeau and other pioneers for the isolation and removal from home of sufferers from tuberculosis—sufferers who as a class had previously been the recipients of lavish and intimate manifestations of family affection, with consequent shortening of the sufferer's life and subsequent multiplication of similar infections among those exposed. With knowledge of good results obtained by isolation and sanatorium methods of treatment, there came, in due time, a reaction, and with public opinion behind the method, we now witness long waiting lists of early victims of tuberculosis eager to crowd the tuberculosis sanatoriums, and we all enjoy the pleasant reaction to the knowledge that the once despised method has in less than a third of a century contributed so largely to the sum of human happiness.

What, then, shall be the contribution of the physicians of this day and generation to periodic health examinations as a means of further adding to the health and happiness of human beings? Shall we wait, as did a noisy minority in the days of Dr. Trudeau, for mortality experience to support the advanced ideas suggested by today's enthusiasts for life extension, or shall we aggressively aid in the battle to extend man's average span of life by postponing the development of degenerative diseases in the individual? There is no doubt as to the attitude of public opinion—it stands foursquare behind the move-

ment, and is determined to overcome prevalent individual apathy. Medical societies have taken the lead, and perhaps the greatest contribution to be made by their individual members who will not actively enlist will be to tolerate the enthusiasm of fellow members who are determined to remain active in the spread of doctrine and practice of life extension by periodic physical examinations.

Since the time of Pasteur, the application of facts learned regarding the disease-causing organisms which invade the human body has resulted in an extraordinary extension of the average span of life in age groups under fifty-five years. May not the same studious application of facts, as learned, regarding the development of degenerative processes in living human tissue result, in the next hundred years, in the addition of many years to the present span of human life?

Do you consistently practice and teach life extension?

THE TECHNIC OF PERIODIC HEALTH EXAMINATIONS

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The subject of the technic of health examinations is apparently a dry one and one on which the majority of practicing physicians do not agree. I want to emphasize first that the examiner must be deeply interested in the subject and enthusiastic about health examinations, and he must manifest and have a very keen interest in the person examined. Now that we have health-service meetings, we should emphasize that this is a new form of medicine, that it is detecting disease in the predisease states, and that it requires special training. And yet most of the speakers who discuss the subject arise and tell us that everybody is equipped to do it, that it is nothing but an ordinary physical examination that we were taught in college. With this I absolutely disagree, so the dry subject of the technic of the periodic health examination will now be discussed.

It goes without question that all graduates of medical schools of today know how to make a physical examination that will detect the disease of which the patient complains; but when we come to detecting predisease states, the technic is entirely different from that of a physical examination. For instance, take the sinuses and teeth: when the ordinary physical examination is made, the mouth is looked into, the tongue glanced at, the tonsils probably have a reflected light thrown on them, and that is all. As a rule, no note is made of whether teeth are devitalized, no transillumination is used to see whether there is infection of the teeth or sinuses, and there is no special x-ray examination or study of the other parts of the body that are liable to be the seat of infection which many of us believe is the cause of the presenility cases which we meet. In a proper health examination, the whole body must be gone over, emphasizing the different points and analyzing them. Examination of the body of the patient who presents himself for health examination should be a search for abnormalities, from dry hair to brittle toenails, and unless that is done we are not properly rendering health-examination service.

I take it, as outlined in the program, that the health service which does not inquire into the subjects of food, exercise, present health, mental attitude toward life, etc., is not a health examination but an ordinary diagnostic physical examination. So, if we physicians are going to meet the demands of the public and give them real periodic-health-examination service, we must rouse ourselves from our lethargy and familiarize ourselves with all the recent advances in diet; we must keep posted in regard to recent observations on hours of work, position at work, surroundings while at work, whether it be in mill or in office; we must learn what is best for all the different types of people as to exercise. We all know that people past 40 or 50 cannot do the active physical work that others do at 18 to 30, and we must individualize and be specific in our advice as to exercise and diet. We must inquire carefully and searchingly, and to do this it would be best for us to have an outline such as the periodic-health-examination service sheets of the American Medical Association, so that nothing is overlooked. They take up the conditions of work in all its details—the surroundings as to congeniality, quiet, etc.; sleeping conditions; diet, consumption of milk, water, tea, coffee; use of alcohol, candy, tobacco; bowel movements; and exercise; as well as social, religious, political, and trade associations. Many a person is a wreck as the result of too much social or business activity. All these things must be brought out searchingly, and then the physician should qualify himself to give proper advice to the examinee, not only in regard to his physical defects, but also in regard to his habits of living, even inquiring into his financial status and making the advice to suit that.

Such service cannot be rendered with the knowledge which we received in medical school; neither can we acquire the necessary information from a perusal of pamphlets sent out by pharmaceutical houses. We must ourselves awaken

and be masters in the specialty of periodic-health-examination service, life extension, and prolonged efficiency. This is an entirely different service from an examination to make the diagnosis of a complaint.

It took a few years for the public to appreciate the value of the "Safety First" slogan in industrial life, that it was superior to living on the allowance of a dead or maimed breadwinner, and now they are equally awake to the possibility of extending the span of efficient service in their lives. They are demanding more of the physician than a diagnosis which is later confirmed by autopsy.

OPPORTUNE RECOMMENDATIONS FOR THE EXAMINEE FOLLOWING PERIODIC HEALTH EXAMINATIONS

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PITTSBURGH, PA.

The examination finished and a complete record made, what is the next step? The examinee should be dismissed with the promise of an abstract of the report which will be sent as soon as possible to his regular medical adviser. If he has no medical adviser, the report should be sent to one whom he shall choose from a list of competent men furnished to him. It is often well to strengthen the cause of the periodic health examination by mentioning the fact that the leading life-insurance companies of the country have demonstrated their value and shown their faith in them by offering to pay for these examinations for their policyholders.

The answers submitted by the examinee and the complete record of your examination must be meticulously read and carefully studied, checking all irregularities and abnormalities with a red pencil. A summary of the findings and of the proposed advice should then be made. This summary forms the basis of a carefully written letter in which all variations from the normal are specifically mentioned and their probable relation given. This letter must vary according to the intelligence and education of the examinee. In appropriate cases it should include definite advice regarding personal hygiene, clothing, ventilation, fluid intake, exercise, work, recreation, rest, general or special diet, definite instructions as to the use of coffee, tea, alcohol, and tobacco, control of the body weight, the regulation of the bowels without the use of laxatives, the care of the teeth, including sufficiently frequent visits to a competent dentist and periodic health examinations, preferably by the regular medical adviser. This periodic examination should be urged particularly at the onset of any striking symptoms such as pain, shortness of breath, palpitation, numbness, nervousness or irritability, loss or gain of weight, persistent cough, increase in the frequency or amount of urination, swelling of face and ankles, or loss of blood from any part of the body. It may be advisable to give here a list of reliable specialists from which may be chosen one or more for the more thorough study of some particular region, or regions, of the body, or if the indications are sufficiently definite, a list of surgeons from which may be chosen one for an immediate operation if you should deem this necessary.

An abstract of this letter should be given to the examinee. These lists of dentists, specialists, and surgeons, should appear in both the letter and the abstract. The letter itself must be most tactfully worded in order to make it unirritating to the recipient. A printed circular letter is less apt to give offense than a written letter with its more personal appeal.

We are aiming to make periodic health examinations popular, and we want all general practitioners to be eager to fit themselves to make these examinations. The medical examiner to whom the complete report of the examination is addressed must be told explicitly, but most tactfully, that an abstract of the letter which he has received has been sent to the examinee. In fact, it would probably be wiser to enclose a copy of the abstract with the report.

If the examinee is one of your own patients presenting himself for his first periodic health examination, he should fill out the sheet for his personal record and you should examine him just as thoroughly as though he were a stranger. Nothing should be taken for granted. The answers he has submitted and the notes you have made of your examination should be carefully studied, and the summary of your findings and proposed advice should be made out in duplicate, one copy to be filed with his history and the other to be sent to the patient.

Subsequent examinations should carefully bring your records up to date with such recommendations as are appropriate. Records of periodic health examinations should always be submitted to the examinee in writing.

I wish to stress the advisability of a most optimistic attitude of the examiner throughout the examination, and any abnormalities that are discovered should be treated as lightly as possible, without suggesting that they are unimportant. At the same time, the examiner must realize that he is morally responsible that urgent indications shall be met promptly by competent men.

I wish here to acknowledge my indebtedness to Dr. Francis Ashley Faught for the free use I have made of his excellent paper read before the joint meeting of the West Branch of the Philadelphia County Medical Society and the West Philadelphia Medical Association, Thursday, February 25, 1926

ABSTRACT OF DISCUSSION

On Periodic Health Examinations

Judson Daland, M.D. (Philadelphia, Pa.): Doubtless every one present is fully convinced that periodic health examinations are of the utmost importance. The practical thing we must look forward to doing is to spread this idea among physicians and among the public. These examinations should be made by the family physician. It is a duty to which he is unaccustomed, and he should, therefore, make a special study of the whole problem. To examine a man who is presumably normal and decide whether or not he is normal is far more difficult than to diagnose a disease like pneumonia, for example.

One of the best ways of emphasizing the importance of periodic health examinations in the prevention of disease is to instruct each of your patients at the time he is under your care. There is no better time to convince an individual of their value than when he is ill. Of course, general publicity, properly given, will help the public in general to know what it means to come to a physician for periodic examinations when apparently normal.

The health examination is not merely a physical examination—indeed the physical examination is often unimportant—but a general examination of the whole individual, including a definite inquiry into his habits of work and play, exercise, sleep, diet, use of tea, coffee, tobacco, alcohol, etc., so that ultimately advice may be given which will be worth the time consumed and the money expended. The vast majority of the preventable diseases have their inception in the mouth or head cavities. Therefore, the recommendation that a minute and thorough examination be made of these cavities is of the utmost importance, because not infrequently, in fact quite usually, foci of infection in the head cavities are symptomless. A detailed and comprehensive history of the individual may be of the utmost importance, for although the results of physical examination may be negative, the history may reveal the previous occurrence of a disease likely to become latent, and whose existence would thus be diagnosed even in the absence of symptoms. A concrete example of this would be a history of chancre, and no recollection of symptoms following the initial lesion. Yet the earlier symptoms of syphilis of the nervous system may be present to so slight a degree as to be easily overlooked. It is very important to go into all the details regarding the life habits of the individual. Many persons are victims of habits that are disease-forming, the recognition and correction of which means prevention of disease. To my way of thinking, the most important reason for a periodic health examination is that it may prevent disease, and today every member of the medical profession is vitally interested in this subject.

Francis Ashley Faught, M.D. (Philadelphia, Pa.): I have conducted health examinations for the past fifteen months. During the past year a form letter was sent out to approximately four hundred patients of record, telling them of the advantages of the health examination. As a result, appointments were made for sixty-three examinations, a return of approximately 6.6 per cent. In addition, forty health examinations were made upon individuals who applied for examination for various reasons. This is not a very encouraging proportion when viewed as a whole. This is offset by the fact that a progressively larger number are now applying for examination as a result of public education.

Efforts to obtain reëxaminations have been very discouraging, as up to the present time but two have been made; one at the expiration of a six-months' interval on a patient who returned on request, and one at the end of the one-year period.

After commencing this work I very quickly discovered the inadequacy of the forms provided, both by our State Society and the American Medical Association. The result was the gradual development of a complete form of my own, which, in my hands, has proved satisfactory. There are four sheets, two to be answered by the patient prior to examination.

I have roughly summarized one hundred examinations, and will give the data on a percentage basis of the major defects found:

Mouth and teeth—58 per cent—including alveolar abscesses, infected stumps, pyorrhea, gingivitis, excessive tartar, and defective or insufficient mastication, due to poorly fitting bridge-work and plates, and lack of teeth.

Tonsils—62 per cent—the criterion here being excessive enlargement with injection of the anterior pillars, or congested anterior pillars with small adherent or submerged tonsils. Among the latter it was often possible to demonstrate pus.

Ethmoids—36 per cent—were considered chronically diseased when there was evidence of a purulent discharge or crusting, where polypoid degeneration was present, or when excessive size, after shrinking, showed persistent pressure points which obstructed drainage.

Septal irregularity—26 per cent—was considered pathologic when it produced definite obstruction of which the patient was conscious, or which could be demonstrated after shrinkage of the mucous membranes, or in which drainage was definitely interfered with, due to close approximation or contact with the turbinates.

Of the *ears*, 3 per cent showed chronic otitis, 19 per cent defective hearing (one or both ears) and 19 per cent impacted cerumen. Various degrees of sclerosis of the membranes and several inflammatory conditions of the external auditory canal may also be encountered.

The *abdomen* was investigated from the standpoint of excessive fat, undue relaxation, localized tenderness, enlargement of the liver or spleen, and palpability of the kidneys. The percentage of patients with abdominal conditions requiring further study or treatment, was approximately 66 per cent. The gall bladder was definitely tender or palpable in 10 per cent. Tenderness over the appendix was found in 12 per cent. The spleen was palpable in 2 per cent, the right kidney ptosed in 3 per cent, and there was marked abdominal relaxation with probable visceroptosis in 27 per cent.

The *heart* showed some abnormality in 47 per cent of the cases. This included valvular disease, enlargement, abnormal accentuations at various valve areas, deficient muscle sound, and other evidences of myocarditis.

Blood pressure—6 per cent showed hypotension (100 mm. systolic or less), while 10 per cent showed definite high blood pressure (160 mm. systolic or over), the highest being 250 mm.

Chest abnormalities were noted in 10 per cent. These included early tuberculosis, empyema, bronchitis, and evidences of asthmatic conditions.

Concerning *weight*, there were 27 per cent who were twenty or more pounds overweight for height and age, the greatest being plus sixty pounds. There were 21 per cent more than fifteen pounds underweight, the greatest being minus thirty-eight pounds.

There was definite *thyroid* enlargement, with or without symptoms, in 14 per cent.

The *feet* were studied from the standpoint of relaxed and completely broken-down arches and pronation. Thirteen per cent were found to be in such condition that the feet needed treatment.

Pelvic abnormalities were found in 62 per cent of the females, many having severe lacerations and posterior displacements. Laceration and erosion of cervix were very common.

The *prostate* was enlarged in 22 per cent of the males.

Inguinal hernia of varying sizes occurred in five per cent. There was one umbilical hernia, many cases of hemorrhoids, and several of varicocele.

The discussion was closed with a lantern demonstration of health-examination forms used by the speaker.

Joseph C. Bloodgood, M.D. (Baltimore, Md.): In Maryland, the Medical and Chirurgical Faculty, through its president, Dr. Bowen, has appointed a committee which is ready to report unanimously to the faculty recommending to and even urging upon the people of Maryland and the medical profession periodic examinations. The committee has decided that, in the beginning, the technic of the examination will be as simple as possible, and the paper work reduced to a minimum.

Allow me to take this opportunity to give you as briefly as possible my personal experiences with periodic examinations. Those with which I am most familiar have been brought about through the education of the public on the importance of immediate examination after the first symptoms which may suggest cancer. For example, since 1913, the American Society for the Control of Cancer has been carrying on an educational campaign throughout the United States and Canada.

Put into a few sentences, the correct information which is being given to the public is as follows: If a woman feels a lump in the breast today, the examination should be tomorrow. Every woman, especially those who have borne children, who notices any difference in the usual monthly discharge or any reappearance after its cessation, should not be content until she has seen her family physician. Any soreness in the mouth, the appearance of a white patch, especially in men and women who use tobacco, should be looked upon as a warning, and even as the beginning of a possible cancer. These individuals should not only be informed of the dangers, but should be influenced to give up tobacco in all forms, see their physician and dentist, and have their teeth cleaned. Definite, and even indefinite, indigestion or any unusual sensation in the abdomen must be looked upon as a good and sensible reason for seeing the family physician.

My personal experience has shown that this message has reached many people, so that in my own surgical clinic the relative proportion of benign and malignant lesions has been reversed. Inoperable cancer has been reduced, early cancer has been augmented, and the permanent five-year cures have tremendously increased. Previous to 1900, the actual percentage of individuals seeking advice because of lesions of the oral cavity, skin, and breast which, on examination, proved to be insignificant and required no operation was less than three per cent. Since 1920 this group has increased to sixty per cent. At the same time, inoperable cancer has decreased from more than fifty to less than ten per cent. The relative proportion of benign and malignant tumors requiring operation has been reversed from eighty per cent malignant and twenty benign, to forty malignant and sixty benign. In fact, in the oral-cavity and skin groups it is even better.

Therefore, in my own clinic, since 1920, 300 patients come under observation because they think they have trouble with the breast, skin, or mouth, where in previous years there were only 120. This has given me a very large opportunity to record the findings in individuals who thought they had trouble in one region, and really had it in another.

Therefore, our message to the people is not only to seek an examination the moment they are warned, but at least once a year to come in contact with their family physician or medical adviser without waiting for a warning.

There is no question in the minds of members of the medical profession who have had this personal experience that the protective value of periodic examinations is settled. The dangers of omitting these examinations are far greater than any possible dangers of commission if they are made. We can be quite certain there will be blundering in the beginning. Those who are interested in urging the practice upon the profession and the public must beware of too radical a presentation. Unless we have the support of the conservative element of the profession, this progressive feature will be delayed.

The first essential is to bring the patients, who have confidence in their doctors and have already selected them, in contact with their medical advisers before they are ill instead of after. Should there be any warning of illness between the periodic examinations, these patients must be taught that delay is the chief danger.

Another and little discussed value of these examinations is that they provide an opportunity for a conversation between the physician and his patient on the preservation of health, on the earliest signs and symptoms of disease, on the new discoveries in preventive medicine. There is no better opportunity for the physician to educate his patients.

One of the greatest difficulties of reformers is to keep their balance. There is nothing more dangerous to the world than a fixed idea. Let us try, in presenting periodic examinations to the profession and the public, to give the facts on which this advice is based. The medical profession should thoroughly understand that periodic examinations throw upon them a new and very difficult problem. When the ignorant and uninformed individual waits, disease is well advanced and easily recognized when the physician first observes it, and the pathology of the disease is identical with the autopsy or "dead" pathology. On the other hand, when intelligent and informed patients seek examination immediately after the first warning, diagnosis is very difficult. The one who makes the diagnosis not only needs special training, but all the special instruments of precision and laboratory methods. The pathology is an entirely different pathology, and may be called "living" pathology.

When people seek periodic examinations, one is compelled to make an even more thorough investigation, and the recognition of disease in its incipiency is the most difficult problem of all.

I am confident that nothing is gained by delay in order to educate the medical profession to meet these new obligations. I know that surgeons fully trained in "dead" pathology and whose first experience was with the late stage of all surgical diseases learned to recog-

nize the early stages and the living pathology only by personal contact with these cases as they at first drifted in. But their real education was not accomplished until the public received their message of immediate examination after the first warning. The same will be true in regard to periodic examinations. The efficiency of this new venture and all its details can be worked out only as a greater proportion of people go to larger numbers of the medical profession and request these examinations from time to time when they are apparently well.

The experience with the physical examination of men enlisted in the Army during the late war and the much older experience of life-insurance companies indicate that the element of error can be rapidly reduced. Even today some life-insurance companies find that their insured who submit to periodic examinations live longer and present a lesser risk. We know that fire-insurance rates grow less with the improvement in fire protection. Undoubtedly life-insurance rates will grow less as we discover the protection of periodic physical examination.

Periodic examinations will improve the diagnostic abilities of the medical profession. They will make the profession a greater asset to the country. Not until the majority of the people consult the majority of the medical profession for periodic examinations will the medical profession as a whole take its proper place in the scheme of modern science for preventive medicine and in the purposeful function of the protective possibilities of boards of health. The entire medical profession should be a board of health for the entire population.

ELLIOTT B. EDIE, M.D. (Uniontown, Pa.): While we are telling the general practitioners their responsibility to the well people we must not forget that organized medicine has certain responsibilities to the practitioners which have not been wholly met. The practitioner is told to prepare himself for this work by special study, but the literature on the subject is not available in practical form for the busy general practitioner. To be able to give specific individualized direction regarding diet, it is necessary to read many bulky books and reports of research work. Organized medicine should see to it that practical, concise articles summarizing our present knowledge of the subjects necessary to the health examiner are available. *Hygeia*, for example, is a much better magazine for the health examiner than any of the medical journals. Directions for exercise are essential, but we know of very little available literature.

I have talked to a good many men who are doing health examinations on a somewhat large scale and have had some experience myself, and I believe it important that the health clients have written or printed directions given them which can be read at their leisure. A great deal of that could be prepared in printed form by organized medicine.

An objection made by some members of our profession is that these directions should be individualized. They never will be, because practitioners are too busy to write out special individualized directions for every one of these people. They should have available practical diet lists for such things as obesity and constipation and directions for correction exercises. In the course of time we will get away from the printed list and individualize, but there must be a starting point, and these would do a lot to help out the general practitioner.

I am also interested in the possibility of creating neuroses by health examinations. It would be a great hindrance to our future progress if many such cases occurred. For instance, our blood-pressure machines seem to be very mysterious to patients and are prone to create neuroses. We should have great hesitancy in telling people their blood pressure, but should tell them what to do to avoid further cardiovascular damage.

DR. DONALDSON (in closing): The Committee on Public Relations assigned to me the subject "Responsibility for Life Extension," and I hope that my presentation fixes the responsibility. There is no doubt in my mind as to where it belongs. I trust that those of our members who are not enthusiastic over this subject will at least tolerate the enthusiasm of some of the rest of us and not throw cold water on the proposition.

Encephalitis and Its Effect on the Behavior of Children*

A STUDY OF POSTENCEPHALITIC BOYS IN A HOSPITAL SCHOOL

DANIEL H. FULLER, M.D.
PHILADELPHIA, PA.

The group studied consists of boys from 6 to 13 years of age who have suffered from encephalitis lethargica and afterwards showed behavior disorders of so severe a type that they became intolerable in the home, the school, and the community. Their misconduct includes a long list of misdemeanors and crimes, such as running away from home, staying out nights, stealing, breaking and entering, setting fires, lying, fighting, disrupting school discipline, disobedience at home and in school, fits of uncontrolled temper, violent attacks on parents, destruction of property, running with a gang of bad boys, and a universal history of incorrigibility and failure to respond to discipline or appeal of any kind. There was also a complaint in every case of insomnia and a tendency to wander about and disturb the household at night.

Attempts to control these boys in the home, in the regular school, in special class and school groups, and in carefully selected homes had failed. Only penal and correctional institutions seemed available for many of them. These were obviously unsuited for such problems, and offered the possibility of the development of vicious tendencies instead of their correction.

These boys are not feeble-minded nor mentally defective. Their intelligence tests average high, many of them being above the average school boy of his age. Their deficiency appears to be in the moral field, and what influence the encephalitic process may have had in this field of their mentality is an interesting problem.

THE PURPOSE OF THE SCHOOL

The purpose of the hospital school was to try the experiment of dealing with these boys in a

*Read before the Section on Pediatrics of the Medical Society of the State of Pennsylvania, Philadelphia Session, October 14, 1926.

new and specially created environment, where they could be studied intensively both physically and mentally, and where, separated from their normal environments, they could be led along through a daily program of interesting tasks and recreations, in an atmosphere of friendliness and kindness, with wholesome emphasis on standards of manliness and fair play which appeal to every normal boy.

The Method

Careful and repeated physical, neurologic, and psychiatric examinations have been made. A trained psychologist has conducted a selected series of psychological tests of a comprehensive variety. There have been many laboratory tests, x-ray photographs of the head, and special measurements of the body which are all on record. The head of each department has made daily reports of conduct while under his or her supervision, and practical use has been made of these records in dealing with individual situations.

The daily program has been perhaps the backbone of the constructive efforts to rehabilitate these boys and reawaken their sense of moral values. School from 9 to 11 : 30 each morning is under the direction of a regularly trained school teacher who adapts her methods to the situation at hand. Manual training and the resources of our occupational-therapy department, under a trained director and a special teacher with interested assistants, occupy the time from 2 to 3 : 30. In the summer, flower and vegetable-garden work in individual plots was substituted for the indoor manual training. Class gymnastic exercises under the physical director occupy another half-hour. Supervised recreations are a very important part of the program. The boy's interest in outdoor life, in constructive work, in knowledge of practical matters of living, in observation of animals and plants and trees, have all been borne in mind. The building of a clubhouse, including a brick fireplace and chimney, camping out over night and even for a week on our farm lands at Newtown Square, swimming in our swimming pool, supervised boxing, exercise with the punching bag, coasting in winter, visits to the zoo, are among the recreations which have held their healthy interest. Indoor games, playing with toys and playthings, reading and story-telling at bedtime by an experienced storyteller, are to be included also among the numerous recreations provided.

Each day's conduct is marked by the heads of departments. Conduct in school, conduct in the workshop, at the gymnasium, at meals, and during recreational periods is daily given a rating. These different marks are averaged for each day. At the end of a week those who attain a given average have a reward, such as an automobile ride, a visit to the farm, to the zoo, the movies, etc., or some special privilege in the house.

These marks are given for *conduct* only. Excellence or deficiency in school, workshop, daily tasks, garden, gymnasium, or recreations, do not count in the rating, only so far as they are estimated to be a part of conduct. Good behavior, which they understand is neither a goody-goody nor an effeminate standard, is the thing which is made to count most in their daily life.

The group is fortunate in being in charge of a man who is enthusiastic, resourceful, sensible, and patient. Numerous disputes and differences are constantly arising, and the attempt is made to settle them by a presentation of both sides and an appeal to their sense of fairness and justice on grounds which they can appreciate.

Such penalties as being put to bed, an hour or two in the bathtub, meals alone, deprivation of some liberty or special privilege, as the swimming pool, have been quite sufficient. Corporal punishment or severe measures have never been resorted to, they having been proved inefficient before coming to the hospital.

A new arrival was told by his confreres, "If you are good and behave yourself here, you get along fine, but if you are bad and try to be hard-boiled you don't have any privileges or get anywhere." Sometimes appeal has been made to their sense of fair play and justice in settling differences by reference to a court composed of the group with one chosen as judge. The only trouble was that the judge was prone to suggest a more severe penalty than the man in charge, to whom the sentence was referred for approval or modification.

In dealing with their problems, effort is made to get the boy's viewpoint and to be sympathetic with it so far as possible. Honesty and frankness have been emphasized, while deception and evasion are never resorted to. The example of the man in charge, who is looked up to as a big brother, goes far toward shaping their ideals. One of the most effectual punishments of which he has made use is the ignoring, for a half-day, of the culprit who has broken a rule or disgraced himself by some misconduct not sanctioned by the group in executive session. To be ignored by their chief for this period is an open reprimand and a sore trial for the offender.

Repression and discipline have naturally been necessary, but it is interesting to note that they have become decidedly less so than at first. The schoolroom is wonderfully quiet and orderly now compared with the first six months. In the recreation periods, and when left to their own

resources for amusement, there is much more harmony. The fact that these boys are restricted in their field of activity, that they are kept from promiscuous contacts in the community, that they are under institutional authority, that they are diverted and supervised by those whom they respect and like to please, while at the same time they enjoy a wide field of activity and boyish interests, are important factors in the apparent success of the undertaking. The formation of new habits is a slow process. That a continuance under the present conditions may result in the formation of good habits of a lasting nature and the submersion of vicious tendencies, so rapidly developing, is our hope and expectation.

DIAGNOSIS OF POSTENCEPHALITIC CONDITIONS

EDWARD A. STRECKER, M.D.
PHILADELPHIA, PA.

This contribution is a brief clinical study of the presenting signs and symptoms in thirty children who suffered from attacks of encephalitis epidemica. There were twenty-four boys and six girls, ranging in age at the time of the onset from eighteen months to fourteen years. The cases were consecutive, and they should give a fairly accurate idea of the syndrome which may be anticipated during the acute stage of the illness.

Acute Symptoms

The five most constant symptoms were some degree of lethargy, varying from well-defined sleepiness to profound coma (26 cases), double vision (15 cases), fever (13 cases), "influenza" or severe "cold" (10 cases), and headache (9 cases). Less common findings in the order of frequency were strabismus, vomiting, delirium, restlessness, twitching, palsies, dizziness, and difficulty in swallowing. Quite rare were tics, choreiform movements, otitis, tinnitus, joint pains, and retinal hemorrhage. In three instances there was sleep reversal, that is, daytime somnolence with marked nocturnal insomnia.

Types of Malbehavior

The behavior in itself is almost beyond belief. In these thirty children there recurred such misconduct as severe restlessness, disobedience, boldness, impudence, irritability, obstinacy, truancy from school and running away from home, temper tantrums, destructiveness, swearing, obscenity, lying, stealing, forgery, begging on the streets, setting fire and turning in fire alarms, cruelty to other children and to animals, alcoholism, numerous sexual transgressions including sodomy, violence, and homicidal tendencies. I saw a boy who amused himself by trying to drive nails into his infant brother's skull, and another, a boy of seven, who had to be restrained by physical means from sexually assaulting his mother. So far as can be ascertained from this study, there is no essential difference between the types of behavior deviations in boys and girls. Marked restlessness is undoubtedly extremely common, and it is probably true that a certain proportion of the malbehavior may be conditioned by the considerable motor drive which seems to impel the child to be constantly in motion, and against which he is seemingly unable to interpose any inhibition.

Frequency of Behavior Deviations

In only four children did serious behavior difficulties fail to develop. This is statistical evidence to the effect that children who have had encephalitis are exceedingly prone to show marked disturbances in conduct. This point is of some practical value to the practitioner, and should be kept in mind in returning a prognosis. The danger to life is comparatively small, but the likelihood of behavior deviation exists in not less than 85 per cent of the children who survive the acute disease. Furthermore, the troublesome and dangerous behavior is not at all the result of deficient or defective intelligence. In only two of the cases in this series was there mental retardation. The change involves the personality of the child and practically reverses it, but spares the intellectual processes. It has been predicted that encephalitis may make a class of supercriminals.

Onset of Behavior Abnormality

It is of some interest to note how soon the behavior abnormality followed the subsidence of the acute stage. In a very large proportion (75 per cent), it was practically a continuation of the active disease. This gives weight to the theory that the inflammatory process does not cease entirely, but persists in a mild degree, and that we are dealing not so much with an expression of brain destruction as with an irritative pathology. Additional weight is given to this belief by the fact that fairly frequently the lethargy, diplopia, etc., reappear intermittently, even years after the initial illness. The longest free period before the appearance of conduct disorder was four years, but this delay did not in any instance mitigate the severity.

Acute Symptoms Not a Reliable Guide

A close analysis of the early symptoms in the group of four whose behavior was not particu-

larly affected did not reveal any point of departure from the usual symptom complex. In fact, the picture was quite clear and, if anything, more typical than that of the remainder of the series. Likewise, the age incidence was about the same and not only this observation but many similar ones make it clear that children, until the age of 16 or even 17, are exposed to the behavior-disorder complications. Beyond these ages the vulnerability is distinctly lessened.

Acute Symptoms May Be Trivial

The cases in which the acute symptoms were trivial were not so common as had been anticipated. However, in six children, or 20 per cent, the symptoms were so slight that they might have been easily overlooked or mistaken for an ordinary cold. In this group the resultant behavior averaged worse than in the others. The physician should have in mind that certainly the mildness of the acute phase does not provide any guarantee for the future behavior. Again, it is always advisable to consider the possibility of encephalitis. It would be a good clinical rule to regard with suspicion and to observe and treat carefully any child with influenza-like symptoms and persistent sleepiness or transient diplopia.

Relation Between Neurologic Signs and Behavior

It is interesting to study the neurologic morbidity and attempt to establish some relationship between it and the bad behavior. Eight children were wholly free from subsequent neurologic signs. In them, without a single exception, the conduct disorder was extremely severe. It included, in part, violent temper outbreaks, teasing, cruelty, lying, stealing, setting fire, sodomy, begging, alcoholism, profanity, obscenity, destructiveness, and violence. In sharp contrast to this group there were seven who developed a Parkinsonian picture. Viewing their behavior at every stage, even before the paralysis-agitans signs appeared, there were only three who manifested considerable behavior deviation, one was merely seclusive, in two the conduct was only slightly disturbed, and one was unaffected. In the intermediate group, consisting of 15 cases, there were late neurologic phenomena such as headache, dizziness, ptosis of eyelids, diplopia, strabismus, unequal, sluggish, and stiff pupils, color blindness, tremor, choreiform movements, pareses and palsies, limping gait, rapid breathing, and head nodding. The behavior in these children was much worse than in the Parkinsonians, but only slightly better than in those who escaped neurologic damage.

Conclusions

1. The series is too small to justify final conclusions, but the study was intensive enough to permit tentative conclusions.

2. Sleepiness, diplopia, mild fever, influenzal "cold," and headache are fairly constant early and acute symptoms in the epidemic encephalitis of children.

3. Behavior disorders conditioned by encephalitis in children are extremely common, and probably occur in more than 80 per cent of the cases.

4. In the majority of instances the malbehavior appears very soon after the acute phase of the illness, and is probably an expression of continued low-grade brain pathology.

5. At present, no clear relationship between the type and severity of the acute symptoms and the subsequent behavior has been established.

6. Insignificant early signs may be and usually are followed by severe behavior disorder.

7. Absence of late neurologic evidence of brain damage does not preclude behavior deviations. In this series, the behavior was much worse in those children who failed to manifest late neurologic signs than it was in those who suffered severely, i. e., the Parkinsonians. Perhaps, in the latter group, the brunt of the inflammatory reaction falls on brain structure whose function is automatic and motor and not related to behavior.

GENERAL CONSIDERATIONS IN ENCEPHALITIS AS THEY AFFECT THE MEDICAL PROFESSION

EARL D. BOND, M.D.
PHILADELPHIA, PA.

My part of this presentation is to give results of the treatment of the group of patients which Dr. Fuller placed before you, and then to outline a treatment which takes into consideration also the experience which Dr. Strecker has had with a different group. You will have noticed that Dr. Strecker's observations concern an unselected group of boys and girls seen in out-patient service, while Dr. Fuller's material was very different, a group of boys of a certain age being selected because of the presence of bad behavior and the absence of grave neurologic symptoms.

The results in the cases which we have had in the hospital for about two years must be considered from different points of view. From the hospital angle these children have gotten along with very little wear and tear on their parents, on the community, and even on the hospital itself. Ten or more of them are as easily cared for as any one of them by himself. Superfluous energy

has been drained off among themselves instead of extending outward to annoy people around them. These children have responded especially well to the nurses trained in psychiatrics whose habits of dealing with all sorts of moods in adult patients have accustomed them neither to get angry nor to let a boy get his own way by crying, teasing, or tantrums. Having handled bad behavior in a 200-pound adult they come to the task of these little boys rather casually, while the ordinary nurse is scared. Of course, the nurses have the advantage over the parents in that they are distracted by no other duties, as they have attempted to carry out a long-distance plan of reëducation. The children have done average work in school. Their behavior in general has been very greatly improved. Sleeplessness, which was a prominent and distressing feature in the home history of all of our cases, has not been a problem at all in this group. The immediate results, therefore, from the hospital's point of view have been all that can be expected.

Whether these children can get on at home is a difficult question. This is answered in part by the fact that several boys have lately been home on vacations lasting two weeks, and have done remarkably well. In fact, in six cases the parents did not find any trace of bad behavior which had previously made them impossible to get on with. The children also have never raised any objection on returning to the hospital after vacations. It must be remembered that most of these boys have had two or three or more years' training in bad habits before they came to the hospital, and it might be expected that fully as much time would be needed to build up good behavior. In just one case we received a boy three months after his acute attack. During this illness he showed much motor excitement, and imagined he saw people on trees. His physician tried to get him to stay in bed, but he ran about the house and fought if he was interfered with. He threw water all over the house, and especially on the beds. The family were unable to control him. After three months' training with the group at the hospital, he went home and has since finished a year in school in a very satisfactory way. Another boy, brought to us five years after his attack can be considered a graduate after a residence of two years. Before his admission this boy was uncontrollable at home and at school, a desperate fighter, restless, and twitching. At night he often got up and tore the bed to pieces and acted as if he had hallucinations. After a steady progress in the hospital, this boy was sent home five months ago, and his parents report that his behavior has been entirely satisfactory. Two children who were removed by their parents, though they were doing fairly well in the hospital, showed no improvement after the return home.

In general the good results from the group contrast sharply with poor results from the cases which we have tried to treat individually. We have taken girls ten years of age who could not be put with the class, and occasionally we had boys of the wrong age for the group. In these cases we have had no good results whatever. Even in the hospital wards they seemed to make no improvement, and when they were sent home they kept on with their bad behavior.

Some general observations should be mentioned. There has been no evidence of any progressive physical disease in these two years. In many of the children we have found bad behavior developing from a feeling of inferiority, which in turn has risen partly from the physical defects left by the encephalitis. Turned out too soon with other children, they had been teased and tormented by being called cross-eyed or dumb.

Out of our experience with this group some suggestions for home treatment arise, and these suggestions must be carried out by the general practitioner or the specialist in children's diseases. It is very seldom that a psychiatrist gets a chance to treat mental symptoms at their earliest stage, when they respond most readily. Certainly the time to fight these behavior disturbances is before they appear. When the child is still in bed with the early symptoms, which Dr. Strecker has described, the physician ought to prepare the parents for a campaign of reëducation. He should tell them: "You may have to go back to train this ten-year-old in good habits as if he were a baby again. Or you may have to train this ten-year-old with a ten-year-old intelligence as if he were six or seven years old. You must expect irritability, poor judgment, and restlessness, which make it very easy to form bad habits. You must keep him well-rested, well-nourished, and well-occupied; in general, you must keep other children away from him. You must not let him get you angry or excited, you must not sympathize with him or spoil him because he is sick. Punishment is of no use, but you must stick to a sensible course no matter what the patient does."

This is a large order on the family, but the family has a tremendous amount at stake, and its own existence is in danger. The record of one or two children under family care has given me considerable faith in it under exceptional circumstances. In one instance, a girl of six was left by encephalitis without any of the good habits in which she had been trained since in-

fancy. There happened to be an aunt, who had a farm at her disposal, who took the child and gave her constant attention, really special nursing. At the age of eleven years the child seems to have returned to normal. In a second case, a girl of nine who was described before the attack of encephalitis as amiable, docile, generous, and a constant delight to her family, became changed. She threw food and dishes to the floor, tore the paper off the walls, smashed the furniture, and set it on fire. She threw water everywhere. At one time her mother was delighted to see her get out the mop and begin to wipe up the mess, but she turned and hit her mother over the head with the mopstick. She got into a different bed every night, ate her hair, and tormented other children. For three years the parents gave up most of their duties and social pleasures and devoted themselves to her. The mother observed that fatigue and hunger increased attacks of deep breathing and bad behavior, and that regular and full meals made her improve. The parents gave up punishment, but insisted on regular habits. There seems to be a recovery here also, although the parents have almost broken down under the nervous strain. It was also a great help here that there were no other children in the family.

But usually the doctor will find that he has to deal with a father who has to work all day and a mother who has the care of a lot of other children and a house. In this case, with bad behavior beginning, there seems nothing left to do but try to place the child away from home. It is just possible that another home without children and headed by people with the right sort of experience may be helpful. But in the long run I do not see any other help for these children except a children's department in one or more of our State hospitals. I can think of nothing that the members of the county medical societies can do more useful than to lend their influence to the establishing of juvenile groups in State hospitals. If such hospital groups are formed, the children in them must be graded. It would be foolish to put sixteen-year-olds with eight-year-olds, and also, from our experience, disastrous to put children with Parkinson's syndrome or feeble-mindedness in the same group with those bright children who are so often the worst behaved but who show the most promise for improvement.

There are many of these boys and girls in Pennsylvania. The Pennsylvania Hospital alone has over a hundred on its records. Of cases admitted to the Department for Nervous and Mental Diseases, twenty-two came from Philadelphia, four from near-by places in New Jersey and Delaware, and others from Altoona, Harrisburg, Wayne, McConnellsville, Shamokin, Phoenixville, Girardville, Athens, and Reading. Hundreds of cases have been reported from every large center of population in the United States. Chicago has afforded an unusually interesting group. In England, where cases have also been numerous, Dr. Hall has divided them into a difficult, superdifficult, and Apache type, which divisions seem applicable anywhere. In Denmark, Spain, Austria, and Japan the same sort of behavior disturbances appear, and it is rather surprising to see that the great difference in national temperaments and the customs in bringing up children seem to have very little influence.

It makes one wonder about other children who go wrong when we see how insidious in its onset encephalitis can be. We wonder how many unknown or unrecognized inflammations have swept over the brains of our habitual criminals in their youth. The psychiatrists have had a complex but very definite conception of a constitutional psychopath, but it may be that more of these psychopathies are acquired than we know. Fewer criminals may be born bad and more may be made bad by disease and bad management after. When families get into difficulties with their children, even when there is no apparent physical disease, they ought to turn first to the physician for help, and not to the minister, teacher, lawyer, or psychologist. This means that the doctor should be prepared to give those families the same kind of care in the management of the mind that he is prepared to give in things of the body.

ABSTRACT OF DISCUSSION

Of Symposium on Encephalitis

Adam J. Simpson, M.D. (Chester, Pa.): In an organic brain disease such as epidemic encephalitis where the cortex is but little involved, therefore missing the motor syndromes, we must have many psychic residuals of all types. The most interesting of these are the behavior disorders, and it is this problem in the group at the Pennsylvania Hospital that is interesting.

As Dr. Bond has said, this idea has been tried out in different parts of the country, notably the Kings Park State Hospital in New York, but it has never been handled in just the same way. Winther, of Copenhagen, studied a group of seven patients, two of whom were girls. Winther significantly remarks that "They are sent from one institution to another, as they do not seem to fit into the present plan of any, but they urgently need proper care."

In a monograph from Bonhoeffer's clinic in the Berlin *Charité*, Rudolf Thiele reports twelve cases of psychic residuals in epidemic encephalitis. In this group, stress is laid on restlessness and overproduction of impulses as the fundamental features and on the lack of pleasurable emotion usually attending overactivity in children. The author of the monograph says that these children are the helpless tools of impressions from without, while voluntary direction, selection, and inhibition are reduced so that there is a tendency to reitera-

tion and perseveration in a superficial way with decreased emotional life. Twelve out of eighteen of Thiele's cases showed definite improvement.

It has been a privilege to be able to see these boys in the Pennsylvania Hospital and to talk to them in the work room and school. One feature that, to my mind, stands out prominently is exaggeration of character and habits. The inversion of the docile, diligent child into one of morose activity with fits of extreme anger and destructive tendencies does not seem to be the rule. The impression one gets in observing this class is that there is an increase in any tendencies the child showed before. If he was destructive before, he will be more so; if he was irritable before, this fault will be increased. The psychometric rating was about normal, with the exception of two, as I remember, and they were only a little low. The fundamental intellectual processes appeared to be intact, and the apparent desultoriness of thought observed in some was due to lack of attention and interest.

The work under the direction of Drs. Bond and Fuller has shown the benefit and importance of control and management of these cases over a sufficiently long period. These are not mental defectives, and if they are potential criminals and delinquents, the clear conclusion is that provision should be made for them in a State hospital.

William C. Sandy, M.D. (Harrisburg, Pa.): I represent the State Bureau of Mental Health, and we have been receiving an increasing number of requests for accommodations of children of this type. As Dr. Bond has indicated, they do not fit in well in any of our institutions. As a rule they are not mentally deficient, and of course our mental hospitals are constructed and equipped for adult cases. However, we have to take a number of these children into the mental hospitals. Some of them come from the Juvenile Courts, others from the schools, and others from general practitioners.

The Allentown State Hospital, of which Dr. Klopp is the superintendent, has within the past year made special provision for children of this type. He has had under treatment and observation some 15 to 20 children of both sexes. He has provided, so far as possible, separate accommodations for the children, and has prescribed a routine full day, habit training, recreation, occupational therapy, physical training, and so on.

We realize fully the need for special facilities for children suffering from mental disorders, and the State has a definite place in its program of expansion for such facilities in at least one mental hospital, and as time goes on, in others. Of course, whether or not we can furnish these depends upon the amount of money that is appropriated.

J. Bruce McCreary, M.D. (Harrisburg, Pa.): Like Dr. Sandy, I represent one of the departments of the State administration—the Department of Health. I have been wondering how many of you realize what an extensive problem this is. These are not mentally deficient children. We have in the fourth-class school districts of the State, which are the districts made up of boroughs and townships of less than five thousand, approximately seven hundred thousand children in the public schools alone. Of those seven hundred thousand children, there are over 78,000 that have been reported to us by our medical school inspectors as mentally retarded. From the very superficial examinations that are made, and from the reports we have received, we figure there are only 12 per cent of those 78,000 children that are actually mentally deficient. The rest are retarded because of some other physical defect, and from a study of these reports I assume that a very large proportion of the 88 per cent are children that will fall within this group.

I have been wondering how much of the damage to the character that has been spoken of here has been done not only by encephalitis but by other acute infections of childhood during the preschool years and does not show until the child gets into school. From what I can see in these reports, a very large number of mentally retarded children in the schools are the incorrigibles; so you see what a problem you have before you to provide State care for these children.

Walter Freeman, M.D. (Washington, D.C.): The principal thing these children need is understanding. Parents and teachers often do not understand why children who have been sick should carry on in such a ridiculous way, and label them as born criminals. Under the ordinary treatment accorded these patients in the home and the school, they make very little progress toward normalcy. Drs. Fuller and Bond have pointed a way for their rehabilitation. There is a fairly favorable prognosis over a long period of time, judging from published reports, when these behavior disturbances are counteracted and the patients brought back to a realization of what is expected of them.

In the case of young children who have had encephalitis the prognosis must be guarded, because mental deficiency is much more apt to develop in children under two years of age. Also, in those cases that develop a Parkinsonian syndrome little improvement can be expected, particularly of the physical disorders. In the case of patients with conduct disorders, if they are trained along the lines described by Drs. Fuller and Bond, good results can be expected.

Case Reports*

ACUTE PERFORATED GASTRIC ULCER AND TREATMENT

LLOYD G. COLE, M.D.
BLOSSBURG, PA.

The patient, a man aged 51, merchant, was a rather poorly nourished subject. He entered the hospital December 4th with the following history: For the past eight years he had had marked "stomach trouble," attacks of indigestion and severe epigastric distress, more pronounced after the evening meal, loss of weight, and the usual symptoms of gastric ulcer. During these attacks, the pain would be located near the left costal margin, and vomiting would occur. About five months ago he had been taken with a sudden and severe pain in the left lower quadrant of the abdomen. At this time he was confined to his bed for about one month. He could not eat, vomited, and had abdominal distress which seemed to localize on the left. He was treated by an osteopath, and no diagnosis was made. Convalescence was slow, but finally he recovered sufficiently to go to his store, still having attacks

* Read before the Section on Surgery of the Medical Society of the State of Pennsylvania, Philadelphia Session, October 13, 1926.

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BOOK REVIEWS

(Concluded from page 336.)

appended discussion, and in many instances with a photograph of the lesion in question. There are many other data presented in table form; for example, differential diagnosis, summaries, diagnostic mistakes, and tables captioned "A Catechism and Don'ts." These tables alone contain a mint of clinical facts. This plan of presentation is unlike that of the conventional textbook. It is essentially didactic and adds much to the perspicuity. Certain sections are printed in smaller type, such as discussion of rare conditions and expatiation of matter in the larger type. Excellent features are the stressing of differential diagnosis in many phases of clinical syphilology, and the large number of photographs of a high-grade character which emphasize such diagnosis.

Every topic is thoroughly and fully discussed. The book is an excellent one, and well worthy of the enormous amount of time and work that the writer must have expended. It should be in the hands of every physician who is concerned in the diagnosis or treatment of syphilis.

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of abdominal distress, marked constipation, and able to eat only small amounts of food.

The present attack had come on just twenty-four hours before admission to the hospital, with sudden overwhelming epigastric pain and collapse, when he fell to the floor in his store. The same osteopath was called, who treated him for twenty-four hours, and then, becoming alarmed at his patient's condition, called a physician, who made a diagnosis of acute perforated appendix, and sent him to the hospital.

On admission, he presented all the symptoms of an acute perforated gastric or abdominal ulcer. During the twenty-four-hours' delay his condition had become very serious, a moderately advanced peritonitis having developed. There was diffuse abdominal boardlike rigidity, distention, tympany, vomiting, anxious countenance, and rapid pulse. The maximum point of tenderness was in the right iliac fossa.

The interesting feature of the abdominal examination was that we could palpate a mass above the umbilicus extending to the left and somewhat downward, movable to a certain extent, and suggestive of a new growth. Aside from the abdominal findings, the patient had a severe pyorrhea, untreated, which may have been an etiologic factor in his condition.

The diagnosis was acute perforated gastric ulcer. The abdominal mass and history of left-abdominal pain were suggestive of a malignancy, but where located we were unable to decide—possibly in the colon.

Operation was done under local anesthesia. By this method it is necessary only to infiltrate the abdominal wall, to manipulate carefully and avoid traction. A general anesthetic should not be used in these desperate cases when it is morally certain that it will be the decisive factor for life or death. Local is then the anesthesia of choice.

Briefly, this is what was found: There was a large perforated gastric ulcer on the anterior lesser curvature about 4 to 5 cm. from the pylorus, easily admitting the thumb into the gastric cavity, and continuous with an old scar. I was unable to determine whether it was a continuation of an old ulcer or a distinct ulcer in itself. The abdominal mass proved to be due to an old perforated gastric ulcer with exudate and adhesions adherent to the abdominal wall, much induration and scar-tissue formation, and narrowing of the gastric lumen—an hourglass stomach.

On account of the desperate condition of the patient, the ulcer was rapidly closed with a double row of Lembert's sutures of linen, without cauterization or excision of the ulcer. The tissue was very friable, which necessitated a wide sweep of the needle. A gauze drain was placed in the vicinity of the ulcer, and a second incision was made under local anesthesia in the lower right quadrant of the abdomen, and rubber tubes placed within the abdomen.

Under supportive treatment, blood transfusion and large amounts of saline hypodermoclysis, the peritonitis subsided, but seven days later pyloric obstruction developed, and on the ninth day a posterior gastrojejunostomy was done under local anesthesia. The patient's recovery was uneventful, and he is now apparently normal, has gained in weight, and is able to eat anything without gastric disturbance, with no recurrence of ulcer symptoms.

The interesting features about this case are: abdominal mass due to old perforated gastric ulcer complicating an acute perforation either of an extension of the original ulcer or of a new one near by; pyloric stenosis due to scar formation; use of local anesthesia in these desperate cases.

The time elapsing from perforation until the patient comes to the operating room determines to a great extent the type of operation to be performed, whether simple suturing, local excision, cauterization and suturing with gastroenterostomy, or a partial gastrectomy.

INOPERABLE URETHROVESICOVAGINAL FISTULA CURED BY SIMULTANEOUS DOUBLE URETERAL TRANSPLANTATION INTO THE PELVIC COLON BY THE COFFEY TECHNIC

CARLYLE N. HAINES, M.D.
SAYRE, PA.

Transplantation of the ureters into the colon is not a new surgical procedure. Heretofore, however, the operation has been performed in two stages, necessitating two major operations.

Coffey in 1925 described a technic for simultaneous implantation of the right and left ureters into the pelvic colon which does not obstruct the ureters or disturb kidney function. The following case report in which this principle was carried out by Dr. Guthrie and the writer will illustrate the technic of the operation and the postoperative result obtained.

Mrs. H. R., aged 27, was admitted to the Robert Packer Hospital, December 7, 1922. Three years before, following instrumental delivery, she was badly lacerated, with a resulting incontinence of urine. For this condition she had been operated upon twelve times in one of the larger cities.

Physical examination was essentially negative. Pelvic examination disclosed a hole in the floor of the bladder extending into the urethra which would admit two fingers. Cystoscopic examination showed the urethra to be badly lacerated and deformed. There was no evidence of sphincter control. Both ureters were functioning normally.

The following day an attempt was made to close the fistula and a plastic operation was done on the urethra. In this we were partly successful. We succeeded in closing the fistula communicating with the vagina, but owing to loss of sphincter control, the bladder would hold but a few ounces of urine, and this when she was lying down.

During the next two years three unsuccessful attempts, the last one a reconstruction operation recently described by Ward, were made to repair or reconstruct the urethra.

Following our fourth, or the sixteenth unsuccessful attempt to cure this condition, we advised ureteral transplantation into the colon. To this the patient readily consented.

The technic of the Coffey operation differs but little from that used in the single transplantation. One of the chief objections to the latter, however, is the necessity of two operations. The swelling and edema of the tissues through the field of implantation are often so marked as completely to obstruct the ureter for several days. It has been found necessary to wait until this swelling and edema have subsided, and the implanted ureter is functioning before the other ureter can be transplanted. Coffey has overcome this by inserting into both ureters noncollapsible rubber tubes which carry the urine through the fields of implantation.

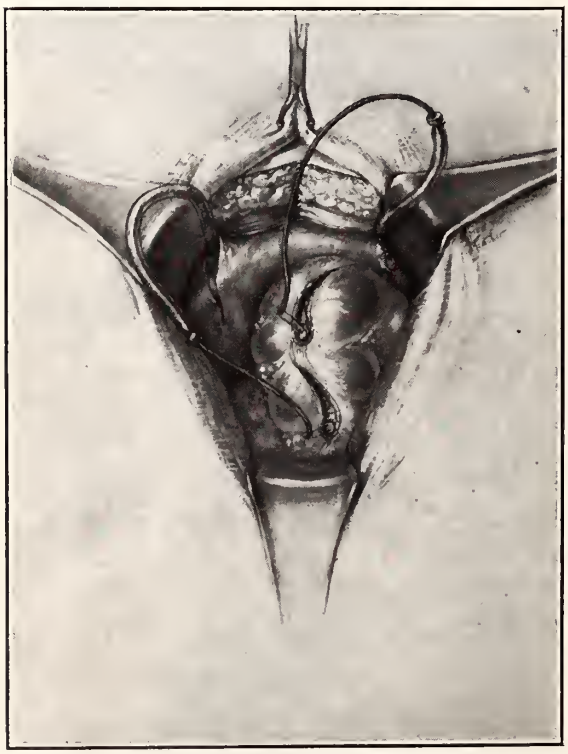


Fig. 1. Both ureters have been freed. Rubber tubing has been inserted into each and fastened. The incisions have been made in colon, and both ureters are now ready to be drawn into their respective places by means of their attachment to the rectal tube.



Fig. 2. The colon containing both ureters is held by an assistant better to mobilize it, the upper incision (left ureter) showing the first row of interrupted sutures, the lower one showing the second row of sutures completing the transplantation.

The patient is given the usual preoperative preparation, which includes two or three enemas to empty the lower bowl thoroughly. The abdomen is opened near the median line. The ureters are exposed, freed, and ligated close to the bladder. The distal ends are touched with iodin or carbolic acid, and allowed to drop back into their places. Into the proximal ends are inserted noncollapsible rubber tubes for a distance of about four inches. These tubes are about two feet in length and are held in place by a linen suture, merely catching the tube but not penetrating it. The thread is then tied around both ureter and tube sufficiently tight to hold it and later cause sloughing of the end. It will be found that both tubes are discharging urine.

A nurse now passes a rectal tube to a point where the left ureter is to be implanted. The intestine is then lifted to a point where there will

be no tension or strain on the ureter when implanted. Care must be taken that the incision is high enough to allow the right ureter to be implanted below the left. An incision about one and one-half inches long is made near the center of the free margin of the intestine and curved over to the outer side. This incision goes through peritoneum and muscle, and the mucosa is carefully freed from the muscularis, allowing the mucosa to pouch out through the incision in the muscular wall. The same is performed lower down for the right ureter. A stab wound is now made in the upper incision through the mucosa, and the end of the rubber tube in the left ureter is attached by linen thread to the end of the rectal tube. The same is done in the lower incision for the right ureter. The end of the tube is attached by linen thread to the side of the rectal tube. The nurse then pulls down on the rectal tube until both ureters are well within the lumen of the intestine. The ureters containing the tubes now lie directly on and outside of the loose mucosa of the intestine, and the walls of the intestine on either side of the ureters are sutured with interrupted chromic catgut, one or two sutures just penetrating the outer coat of the ureter. Finally, a continuous chromic-catgut suture should just roll the intestinal wall over the implanted ureter. The abdomen is closed; the tubes now protruding from the rectum are cut to the proper length and placed in the containers for the urine. The tubes come away of their own accord in about one week.



Fig. 3. Cross section showing both ureters discharging urine through rubber tube.

This patient has been observed over a period of eleven months since operation. She is dry, looks well, has gained in weight, and has perfect control of her urine. She empties the rectum once at night, and is able to retain urine from two to three hours during the day. From the standpoint of kidney function she is normal. Several blood ureas have been done, the highest being 35.7 mg. per 100 c.c. of blood one week following operation. Since then it has fluctuated between 20 and 26.

Clinical Reports*

DIGITALIS AND QUINIDIN IN TREATMENT OF AURICULAR FLUTTER

THOMAS M. McMILLAN, M.D.
PHILADELPHIA GENERAL HOSPITAL

Many physicians regard auricular flutter as a rather rare condition, but I am not in accord with this viewpoint, for out of 7,000 electrocardiograms taken in the last five years in the Philadelphia General Hospital, there were no less than 39 cases of auricular flutter—one out of every 179. This condition, therefore, can hardly be regarded as rare. It is an arhythmia one is apt to meet at any time, and it is very interesting because of the ease with which many of the patients can be treated and the striking results that can be obtained.

The clinical manifestations vary greatly. Whether or not they cause a severe or a slight degree of cardiac failure seems to depend upon the condition of the myocardium. Some patients are hardly disturbed, while others are carried to the last extreme. Two of our patients illustrate this point. One elderly man had auricular flutter, but was never disturbed by it; but the other patient was in the last stage of cardiac failure, and it took heroic treatment to bring him around.

This arhythmia, as a rule, indicates a rather severe degree of myocardial disease. Previous to 1918 there was only one drug used in its treatment—digitalis, whose value was first pointed out by Sir James Mackenzie. It is administered in large amounts until the flutter is changed into a fibrillation. The drug is then withdrawn, and in a number of cases the heart will return to a normal rhythm. Some years ago Mackenzie placed the percentage of auric-

*Abstracts of papers by members of the staffs of various hospitals, presented at the clinical meeting of the Section on Medicine of the Medical Society of the State of Pennsylvania, held at the Philadelphia General Hospital, October 13, 1926.

ular flutter that could be successfully treated with digitalis at approximately 50 per cent. Of the 39 cases mentioned above, there were 25 that I feel I have a right to include in my own series, since I had charge of the treatment. Of these 25 cases, 20 have had normal rhythm restored—18 by the use of digitalis and 2 by the use of quinidin. This is a higher percentage than Mackenzie reported. While this small group is not sufficiently large on which to base a positive statement, I believe that now, when we are not afraid to use digitalis in large quantities, the percentage of flutter that can be successfully treated with this drug can be raised from 50 to 75 or 80 per cent.

Quinidin is a new drug that has come into use since 1918 or 1920. It will abolish auricular flutter and restore normal rhythm in many instances. From my experience, however, I believe that digitalis is far the more desirable drug. I have used quinidin in six cases, and have restored normal rhythm in only three of these. However, in cases in which digitalis has failed, it is always wise to try quinidin. This was the case with the second patient mentioned above.

Illustrative Cases

(1) One man had paroxysms in which every auricular impulse reached the ventricle. This resulted in a ventricular rate of 260. He was put on digitalis, and the flutter was abolished and typical fibrillation intervened. A few days after the digitalis was discontinued a perfectly normal sinus rhythm was restored.

(2) When we secured his first electrocardiograms, this patient had a typical case of auricular flutter, with a four-to-one block—four auricular impulses to one ventricular beat. He showed much the same response to digitalis as the first patient. This is the sort of response we expect in the large percentage of cases of auricular flutter.

(3) The first patient mentioned above presented a two-to-one auricular flutter. His first electrocardiogram was made August 11th, and on September 1st we decided to digitalize him, and accordingly gave him digitalis in large amounts until the desired results were secured, safeguarding against more or less serious results by taking daily electrocardiograms to detect the appearance of the well-known symptoms of overdigitalization. He received three drams of tincture of digitalis per day from the 1st to the 20th of September. This resulted in setting up a four-to-one instead of a two-to-one block. This was not satisfactory, so he was put on one and a half drams of tincture of digitalis three times a day, beginning on the 20th and continuing until the 24th. Fibrillation resulted, when the digitalis was discontinued. He had received so much that some time was required for the fibrillation to give way to normal rhythm, but it finally did.

I have never yet succeeded in converting auricular flutter into fibrillation without using large amounts of digitalis. Usually there are some of the minor toxic manifestations. In nearly every case there has been loss of appetite; in not a few cases, nausea; and in some, vomiting.

(4) In the second case mentioned above we attempted to digitalize the patient, and from August 28th to September 8th he received a dram of digitalis three times a day. This did not affect the auricular flutter, but did set up a pulsus bigeminus. Each ventricular beat had coupled to it a ventricular extrasystole. That would not have alarmed us, but in a tracing taken the next day there was a series of two or three of these ectopic beats coming together—a paroxysmal ventricular tachycardia, which may give way to ventricular fibrillation and death. We were afraid to go any further, so the digitalis was discontinued, and after a few days quinidin was started. Forty-eight grains a day were used, divided into eight doses of the same size, and equally spaced throughout the day and night. The result was a slowing of the auricular cycles, but still the desired change did not appear, so it was decided to push the drug further. Eighty-eight grains were administered, distributed equally throughout the day and night at three-hour intervals.

The effects of a dose of quinidin are supposed to wear off within two or three hours, and it seems logical to keep the heart continuously under the influence of the drug night and day. If it is not given in this way, the heart is under the influence of the quinidin during the day, but through the night the patient is without its good effects. This was the highest dosage reached, and it had a very definite effect. It still further slowed the rate of the cycles, and finally the flutter was abolished and a normal sinus rhythm restored. The man is now in good condition.

These were heroic procedures, and I should not sanction them unless the physician is in a position to watch the patient very carefully at all times for the various symptoms and effects that suggest poisoning with digitalis or quinidin.

DISCUSSION

QUESTION: Do you get any mental symptoms from the high dosage of digitalis or quinidin?

DR. MCMILLAN: We did not in any of these cases. We had one man who attempted to commit suicide by

drinking 2 ounces of digitalis. It did him no harm except to cause nausea and heart block. I do not know how to account for the mental symptoms occasionally encountered, but suggest referring to the work of Dr. David Riesman along this line. Another rare occurrence that I have seen is transient blindness under large doses of digitalis, but I do not know how to explain this reaction. In all but one of our cases of auricular flutter, we have tried digitalis first and quinidin only after digitalis failed.

Question: Is the auricular flutter likely to return in the elderly patients?

Dr. McMillan: It is probably as apt to return in the aged as in the young.

Question: Do you believe that the physician should recognize flutter at the bedside without the electrocardiograph?

Dr. McMillan: In a definite number of cases he should. I have been able to recognize it in quite a number of cases, and have also failed to recognize it. When the patient is in bed, I always count the heart rate with the patient lying down and then sitting up. I have adopted this as a routine, and it has resulted in picking up two or three cases of flutter that I should have missed otherwise. The rate ordinarily does not change with the change of position. If the patient can get out of bed and exercise by walking about the room it is better, but I have picked up some cases simply by the finding that the pulse rate does not change on change of posture.

SUBACUTE BACTERIAL ENDOCARDITIS

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JEFFERSON HOSPITAL

The case discussed herein represents a very interesting problem in diagnosis. The patient is 35 years old. His chief complaints are weakness and shortness of breath, although he is able to be up and out. There is nothing of importance in the family or past histories. A negative point of considerable interest is that he has never had rheumatic fever or scarlet fever. He did have diphtheria, but made a complete recovery. He also had influenza in 1918, and apparently recovered well. He had a Neisserian infection at fourteen, but never had a primary lesion so far as is known.

The present disease began insidiously two months ago, at which time he consulted a physician because of shortness of breath. He improved for a time, but later became worse and was admitted to the Jefferson Hospital on the service of Dr. S. Solis-Cohen, September 11, 1926. The principal indication of his ill health was a marked pallor—a striking anemia. On the day of his admission, we could discover nothing more than this pallor and a palpable spleen which was four finger-breadths below the costal margin. The possibility of a blood dyscrasia was, of course, considered. However, the blood showed only a marked secondary anemia, the leukocytes numbered 4,000 to 5,000, and the smear showed no abnormal cells, so that leukemia was readily excluded.

The possibility of an intoxication such as lead poisoning was then considered, but there was nothing in the history to lead us to suspect this, nor did the physical signs disclose anything to bear out such a diagnosis. Intestinal infestation was also excluded, examination of feces and blood revealing no evidence of parasitic invasion.

After a few days' rest in bed, a careful examination disclosed a definite diastolic thrill and presystolic murmur at the apex. The diagnosis was made. Not simply on the evidence of a valvular defect (mitral stenosis), but with the remainder of the clinical picture (the palpable spleen, slight clubbing of the fingers, and the marked anemia), it was evident that we were dealing with a bacterial endocarditis.

Can a positive diagnosis of bacterial endocarditis be made merely on these findings? Together with the slight but protracted fever, they are enough to make one very suspicious of such a lesion. If, in addition, blood is discernible in the urine from an associated glomerular lesion, and there is a positive blood culture, there can be no doubt about the diagnosis. This we have not yet been able to demonstrate in this case.

Endocarditis was formerly classified on a structural basis as acute and chronic, the acute forms being simple and malignant. Today, largely on the basis of Osler's work some thirty to thirty-five years ago, continued by Libman since 1911, the disease is classified on an etiologic basis—which is the only proper classification. Endocarditis is, therefore, described as rheumatic, syphilitic, atheromatous, bacterial, congenital, with a possible traumatic group. The rheumatic group may be due to acute rheumatic fever, chorea, or tonsillitis. The syphilitic form affects chiefly the aortic orifice. The atheromatous type occurs in old age. Of the bacterial form, the varieties are the acute, subacute, and "indeterminate," the last so called because the etiologic factor is not certainly established. The case cited is of the subacute variety.

The disease is almost always due to infection with the Streptococcus viridans, a slow-growing, nonhemolytic organism which probably gains entrance through the mouth, throat, and nose, or nasal sinuses, and implants itself on valve cusps that have previously been damaged by rheumatic fever. Bacterial endocarditis is not a primary disease. It is an infection that is implanted on valve cusps that have been previously diseased.

The pathology can be very simply stated as representing the form of vegetative endocarditis

between the rheumatic verrucous variety that is found along the line of closure of the valve cusps in acute rheumatic fever, and the fungoid, soft and crumbly vegetations that are present in the acute forms of bacterial endocarditis. The clinical features are marked first of all by a most insidious origin. The patients usually walk around for weeks or months with slight but protracted fever, malaise, pains in the joints or muscles, and chilliness. Usually in this stage they are suspected of having incipient tuberculosis, or if the fever is a little more pronounced they are sent to the hospital with a diagnosis of typhoid fever.

The symptoms divide themselves into a toxic and an embolic group. Thus there are the signs of anemia, plus fever, and occasionally a leukocytosis, and later the evidences of embolism—petechiæ in the eyelids, and painful nodules at the ends of the fingers and toes called "Osler's nodes." Still more serious infarctions occur in the internal viscera—in the spleen, kidney, and brain. Such an accident is often indicated by a chill and a rise in temperature, and sometimes may be the first manifestation of the disease.

Occasionally we have a patient brought in who has had an infarction of the spleen or kidney who is thought to have an "acute abdomen," and only by careful examination, in which the heart is not neglected, is it possible to determine the true state of affairs. One patient was operated upon because of such a mistaken diagnosis. For some months he had not been well, but had had no particular complaints. One night he had a flight of temperature, nausea, and vomiting. He was not especially sick the next day, and his doctor treated him at home for two weeks. Finally, a mass was felt in the left upper abdomen, and the physician concluded that his patient had had a peptic ulcer that had ruptured, and that he now had an abscess. Upon opening the abdomen, he found a large infarcted spleen. Necropsy a short time later disclosed bacterial endocarditis, entirely unsuspected, as the cause of the splenic infarction.

A patient seen recently had a large abdominal mass. The diagnosis was splenic abscess, and he would have been operated on had a heart defect not been found and a decision made that he was suffering from bacterial endocarditis.

Unfortunately this disease carries with it a very serious prognosis. Most of these patients come to a fatal end within a period of from four to eighteen months. Rarely do they live more than two years. Treatment so far has been unavailing. It has been limited largely to the injection of various chemicals into the blood stream in an attempt to bring about sterilization. Arsenic has given some good results. In very rare instances spontaneous cure occurs.

DISCUSSION

Question: Would it be possible to simplify the classification and group the congenital with the syphilitic cases? Does a traumatic endocarditis ever occur without previous disease?

Dr. Weiss: The congenital cases should not be grouped with the syphilitic because, I believe, congenital heart lesions are infrequently due to syphilis or intrauterine disease, occurring, rather, because of an arrest of development that has taken place for some unknown reason. We need pay little attention to the traumatic form. It was included to make the classification complete, and probably occurs only in conjunction with previous disease.

The report on a blood culture should not be expected for two or three weeks. Streptococcus viridans is a slow-growing organism, and may not appear before that time.

Question: How frequent is this condition? I have been practicing for thirteen years, and have seen just one case.

Dr. Weiss: You will recognize the condition more frequently if you are on the lookout for it. Also, many mild cases probably heal spontaneously, and doubtless bacterial endocarditis frequently heals and the patient dies of the secondary effects of the disease, such as cerebral embolism, uremia, or cardiac failure.

THE IMPORTANCE OF PERSISTENT DIGITALIS THERAPY IN AURICULAR FIBRILLATION

WILLIAM D. STROUD, M.D.
PENNSYLVANIA HOSPITAL

A patient who has been attending our heart clinic for the last five years first came to the hospital in 1901 with acute rheumatic fever. At that time he had the typical damage to the heart muscle and valves that goes with the disease, and was told that he must change his work—that of ornamental stone cutter, in which he uses a two-and-a-half-pound hammer. As he was unable to secure other employment at which he could make a living, after seven months he returned to that work, and has been at it ever since. He first visited our clinic on April 15, 1921, and for the past five years his condition has remained about stationary.

His cardiac diameter, measured from the midsternal line, was 14 cm. to the left in the sixth interspace, and now it is about 16 cm. The right border, so far as we could judge by percussion, was approximately 4 to 4.5 cm. These borders have been about the same for the past five years. In 1921 the systolic pressure was 161, diastolic 100. Now the systolic is 210 and the diastolic 125. It has increased gradually. The patient has never shown any signs of congestive

cardiac failure except a few râles at the bases. He has been taken to the hospital at different times for careful study. We have been unable to demonstrate any renal insufficiency, though he has what we think is a generalized arteriosclerosis. There has, however, been no indication for measures to reduce the pressure, although some eye-ground changes are present. He has missed very little time at work.

During these four and a half years, he has taken between twenty and thirty drops of tincture of digitalis three times a day—from 30 to 45 minims daily for nearly five years. During that time the heart rate has remained between 88 and 124. When he came in, the pulse rate was about 62 with a heart rate of 124. During the past two years, under digitalis, the heart and pulse rate have varied according to whether he was resting or was working steadily on a hard job.

This history suggests the need of care in changing an individual's occupation because of organic heart disease. A man's life must not be disrupted by insisting blindly upon his taking up work which would appear to tax his heart less. It may be that he can carry on more easily in an occupation with which he is familiar.

To understand how a heart so badly damaged as this can maintain such a blood pressure, it must be remembered that the peripheral circulation has as much to do with maintenance of blood pressure as the myocardium.

Let us consider the circus movement of auricular fibrillation and the importance of digitalis therapy in this condition. The sino-auricular node lies at the base of the superior vena cava. The impulse arises here, and goes down through the auricular muscle to the auriculoventricular node and through the bundle. In auricular fibrillation the sino-auricular node, the normal pacemaker of the heart, loses control. The impulse is supposed to travel around a circuit of muscle in the auricle about 500 times a minute. If the bundle is nonrefractory it will transmit impulses to the ventricles, and they will contract. Thus, in the treatment of a case of auricular fibrillation, the *apex beat* is the important factor. Digitalis therapy cannot be correctly regulated by the pulse rate. The dosage should be kept at the so-called maintenance amount, varying with each patient, which will maintain the apical rate at that number of ventricular contractions per minute which gives the particular patient the most efficient circulation—usually between 60 and 80. If the dosage is regulated by the pulse, it will be wrong in most instances, for with an apical rate of 100 or more, there may be a pulse rate of 66, which would make one afraid to increase the amount administered.

If it is decided that a patient may do better with a return to normal sinus rhythm rather than on a maintenance dose of digitalis, quinidin sulphate may be used. It may reduce the circus rate in the auricles, and the sino-auricular node may assume its old power as the pacemaker, and the heart return to its normal sinus rhythm.

It is almost impossible to tell by auscultation whether a heart controlled with digitalis has assumed a regular sinus rhythm. The space between beats may seem exactly equal, and the electrocardiogram is the only method of determining that it is not—except one's own intelligence, which gives assurance that auricular fibrillation rarely clears up under digitalis therapy unless it is paroxysmal, or transient following auricular flutter.

A TYPICAL CASE OF GOUT

A. A. STEVENS, M.D.
PHILADELPHIA GENERAL HOSPITAL

The patient, aged 67, is an American by birth, as were his parents and grandparents. He is not of English extraction so far as he is aware. He was formerly a bartender by occupation, and since the Volstead Act went into effect he has been a janitor. He is addicted to the use of alcohol, but apparently was never intoxicated, although he averaged seven to eight glasses of whisky, brandy, or gin a day. He had smallpox and typhoid fever as a young man, but made a good recovery and was well until five years ago. He then had an attack of pain with swelling and redness of one heel. The diagnosis, as usual, was rheumatism. This lasted for six or eight weeks, and after several months he had a similar attack in the other heel. Some months later the hands and elbows were affected. None of the larger joints was involved at any time.

He came into the hospital with suppuration of one of the knuckles of the hand, but notwithstanding this, the temperature was approximately normal, the pulse was between 80 and 90, and the respirations were entirely normal. Naturally, when arthritis develops in a man of 61 and attacks the heel, examination is made for gout. His blood chemistry was absolutely normal, and the blood uric acid was never above 4 mgs. per 100 c.c. Nodules were present about the smaller joints, along the tendons of the hands, and on the left ear there were three or four nodules varying from a pin point to a

small pea in size. These were white when the skin was stretched over them. Still more interesting was a pronounced enlargement of the olecranon bursa, with a cystic condition. Crystals of sodium urate were found in the material in the nodules about the joints. This clinched the diagnosis.

Sydenham drew attention to the occurrence of olecranon bursitis in gout many years ago, but the observation was forgotten until recently. He said that there is a tendency for the material to be deposited about the elbow, and that the bursa may be as large as an egg, as it was in this case. It occurs in from 5 to 10 per cent of all typical cases of gout.

In our hospital we have two or three cases of gout among each thousand admissions. This is about the average, except in Chicago, where a much greater incidence has been reported. It is about the same at the Johns Hopkins Hospital, Baltimore, and at the Peter Bent Brigham Hospital, Boston. Of course, in clinics the incidence is higher, for many patients with gout do not come directly to the hospital.

In the treatment of this condition, one or two remedies are recognized as being particularly beneficial. The oldest is colchicum, yet we do not know how it acts. When given in large doses the only effect appears to be that of a gastro-intestinal irritant. It does not increase the excretion of uric acid, but it almost always gives complete relief. Our custom is to put the patient to bed, and give sufficient colchicum to produce a purgative effect, then to cut the dose about one-half. In the acute stages this treatment is usually quite effective. In some cases seen outside the hospital I have had good results from a French preparation of colchicum known as *liqueur de Laville*.

The other remedy is cinchophen, which is a relative of both quinin and benzol. It has the properties of both drugs, and also increases the excretion of uric acid. This it does not only when the patient is on a normal diet, but also when on a purin-free diet. It probably lowers the threshold of the kidneys for uric acid.

It is not proved that there is a definite relation between an excess of uric acid in the blood and an attack of gout. Such a finding is sometimes absent, as in this case. Some patients with chronic lead poisoning, diabetes, or leukemia, or those recovering from starvation, may show a high uric-acid content but not gout. Furthermore, the injection of large amounts of uric acid has failed to cause acute attacks of gout in susceptible patients. Colchicum does not cause an increased excretion of uric acid; yet it gives relief. While cinchophen does increase the excretion, we are not sure that there is any close relationship between this and the relief of the disease.

Greatest relief from local treatment is probably obtained by hot applications. Lead water and laudanum are as good as anything. A saturated solution of magnesium sulphate is helpful, although there is some doubt as to whether it acts through its depressing effect on the sensory nerves. It has such an effect when administered subcutaneously, but it is questionable whether a sufficient amount enters through the skin to produce this result. Cold applications usually do not give good results.

This case is interesting because of the symptoms enumerated above, and because the diagnosis was made almost entirely on the finding of urate crystals in the tophi. Sometimes these tophi are very small, no larger than a pin point, and are found only on the rim of the ear. Sometimes they are situated on the prepuce or on other portions of the body. Unfortunately, they are present in only about 50 per cent of the cases.

ON THE SALE OF ULTRAVIOLET GENERATORS DIRECTLY TO THE PUBLIC

The Council on Physical Therapy of the American Medical Association, on the basis of the present available evidence, is convinced that the sale of generators of ultraviolet energy to the public for self-treatment is without justification. The Council bases its condemnation of the sale of such apparatus for this purpose on the following grounds:

1. The uninformed public could not take the proper precautions in administering treatments and, as a result, severe general burns or grave injury to the eyes might ensue.

2. Those not familiar with the possibilities of such apparatus would be led to place unwarranted confidence in the therapeutic value of such treatment by the claims that might be made in the literature advertising such generators, and to undertake to treat serious conditions not amenable to such treatment.

3. The unrestricted possession of such therapeutic means would tend to deprive people of expert diagnosis by encouraging them to make self-diagnoses.

4. Such practice would encourage the sale of useless and fraudulent lamps which would be advertised as generators of ultraviolet rays, since the public would have no means at its disposal to determine the quality or quantity of the radiant energy emitted by such lamps.

For the foregoing reasons, the Council on Physical Therapy considers as detrimental to public welfare the sale or the advertising for sale, directly to the public, of a generator of ultraviolet energy. Under rule 11 of its Official Rules, the Council will declare inadmissible for inclusion in its list of accepted devices for physical therapy apparatus manufactured by a firm whose policy is in this matter detrimental to public welfare.—*Report of the Council on Physical Therapy, J. A. M. A., January 22, 1927.*

THE ATLANTIC MEDICAL JOURNAL

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Editorials

DR. CHEVALIER JACKSON

The Philadelphia Award, for 1927, has been fittingly bestowed upon Dr. Chevalier Jackson, professor of bronchoscopy in the Jefferson Medical College, and professor of bronchoscopy and esophagoscopy in the University of Pennsylvania Graduate School of Medicine. The Award consists of a medal, a diploma, and a check for $10,000. It is endowed by Edward W. Bok, as yearly recognition for the resident of Philadelphia who during the preceding year has brought to culmination a service "calculated to advance the best and largest interests of Philadelphia." The previous recipients were Leopold Stokowski, Dr. Russell H. Conwell, Samuel S. Fleisher, Dr. Charles C. Harrison, and Samuel Yellin. In making the presentation, Senator Pepper said: "Now into what field? Law, letters, architecture, engineering, painting and sculpture, community service, industrial achievement, medicine and surgery. What do you think of the last one?" Eager applause burst from the audience at that first definite hint. The sixth recipient was to be a member of the medical profession.

"No tablet in Philadelphia's Hall of Fame is more worthily filled, nor will any be in the future, than that inscribed with the name of Dr. Chevalier Jackson. The story of his science and skill has gone all over the world, wherever surgery ministers to mortal misfortune. So many times he has accomplished the seemingly impossible in his particular field, that the wonder of it has seemed to disappear, and in place of the acclaim of the "miracle" there has come an acceptance of a demonstrated fact that Dr. Jackson can remove anything that any one, child or adult, can inhale or swallow." All hail to the pioneer in a field which until recent years was regarded as hopeless!

POSTMORTEMS AGAIN

In this number of the JOURNAL will be found the report of the January 5th meeting of the Luzerne County Medical Society. In a paper read by Dr. F. D. Thomas, Coroner of Luzerne County, we note the following: "There have been no less than a dozen cases during my term of office that absolutely required a postmortem examination, where the physician did everything possible to prevent such examination, or else refused to assist the coroner's office in any way."

It is most unfortunate that this attitude is being shown. Our State Medical Society has rendered yeoman service in regard to the postmortem situation, and we have been commended all over the United States for the survey that was made, and the follow-up that has resulted therefrom. One would hardly credit, in our State, where the postmortem propaganda has been carried to the threshold of our members for three years, that there exists the condition referred to by Coroner Thomas.

May we urge the physicians of Luzerne County who are guilty of this lack of coöperation to rouse from their lethargy, and fully realize the responsibility in this matter which squarely belongs to them, and coöperate with the Coroner to the fullest extent.

The following is an abstract from the *Bulletin of the American College of Surgeons,* January, 1927: "The number of postmortems in the majority of standardized hospitals is far too low. Much has been said and written of late in this regard. A splendid review of the subject will be found in the *Bulletin of the American College of Surgeons,* January, 1926, Vol. X, No. 1, pages 42-48, by Frank C. Hammond, M.D., Philadelphia, setting forth advantages, ways and means, and other information based on a careful survey

of the State of Pennsylvania. The American College of Surgeons urges all standardized hospitals to give this matter serious attention during the coming year. Careful inquiry will be made in regard to this feature in all subsequent surveys."

This shows that even in many of the standardized hospitals, the percentage of autopsies commensurate with modern medicine is not being secured, and upon future inspections by the College, those hospitals not showing an acceptable percentage of autopsies may be removed from the approved list. We have called attention to this before, in order that hospital administrators, lay and medical, will be *on guard*. But, after all, the responsibility for securing permission for autopsy rests entirely with the physician in charge of the patient.

PERIODIC HEALTH EXAMINATIONS

In this number of the JOURNAL appears a symposium on periodic health examinations. Our members are urged to read very carefully not only the papers of the symposium, but the very instructive discussion. Dr. Walter F. Donaldson in his presentation clearly shows that the responsibility for periodic health examinations very definitely belongs to the physician. Dr. Orlando H. Petty, who has been active in furthering the cause of health examinations, outlines the technic, and emphasizes "that the examiner must be deeply interested in the subject and enthusiastic about health examinations, and he must manifest and have a very keen interest in the person examined." The recommendations for the examinee by Dr. Lawrence Litchfield are very timely, and worthy of most careful consideration. In the discussion, Dr. Judson Daland aptly states that health examination "is a duty to which the physician is unaccustomed, and he should, therefore, make a special study of the whole problem." Dr. Francis Faught who has made a special study of the problem, submits an intensely interesting statistical study, which should graphically appeal to all and show the value of health examinations from a very practical aspect. Dr. Joseph C. Bloodgood adds sage advice. Dr. Elliott B. Edie, who has shown marked interest in the problem, makes some very practical recommendations.

Unfortunately, periodic health examinations are being commercialized and mercantile companies are organized for the purpose of making these examinations. This, in itself, should arouse every physician to action, because it shows the demand for this service, and unless we meet the demand, and intelligently, the public will drift to these "institutes," or "clinics," or whatever name they bear. The public seems to be impressed with the equipment displayed by the commercial agencies, and while it is true that the average doctor does not possess all the apparatus found in such agencies, it must be borne in mind that in the greater majority of cases such equipment is unnecessary to conduct the required examination of the individual.

"The needs that are essential are interest in the individual, time, training, and common sense. And finally, there is needed a knowledge of the individual's environment, intellectual equipment, emotional reactions, and the dangers to which he is exposed, which can be had only through acquaintance with him. This the physician acquires through repeated contact with his patients under various conditions, and this the health clinic rarely can obtain in one examination. It is not in the blanks that patients fill in, it is not in laboratory reports. It comes only from continued observation, and without it the proper evaluation of an individual's condition is impossible." Hence, it is the attending physician who should make health examinations, and he must realize and appreciate that the responsibility for so doing is entirely up to him. Commercial clinics tend "to destroy the confidence between patient and physician which is essential if the former is to obtain the best kind of medical care." If highly technical examinations are necessary, any physician can refer his patient to the proper place to have them done, and he, and not the patient should receive the report from the examiner, so that the patient may profit not only from the technical findings but also from the doctor's knowledge of him as an individual."

Too much stress cannot be laid on the absolute necessity for periodic health examinations of children of the preschool age. Beginning in infancy they should be examined at stated intervals, that diseases may be detected in their incipiency, and impairment of sight, hearing, speech, and other physical defects detected and corrected previous to the time the child is admitted to school, in order that when the child is ready to begin its period of scholastic education, it may enter in the best possible mental and physical condition. During this period of the child's life should be considered, too, vaccination against smallpox, and immunization against diphtheria and scarlet fever, to the end that "the usual diseases of childhood" will be abolished, and "the usual health of childhood" be maintained. How frequently do we hear adults censure their parents for not having had their children's defects corrected during early childhood, and yet when they in turn become parents, pay little or

no attention to their own children's physical and mental condition.

Then, too, it is very important that the individual be made to realize the necessity for observing the recommendations made by his physician, and the necessity of returning at the intervals requested by him for an intelligent follow-up. At the meeting of the New York Tuberculosis and Health Conference, held in New York City in January, Dr. Leverett D. Bristol, executive officer of the Bellevue-Yorkville Health Demonstration, made the following terse comment in discussing periodic examinations as essential to any health program: "It is better to be inspected when suspected, than dissected after infected."

LYCOMING'S GOOD IDEA

The Lycoming County Medical Society, in conjunction with other agencies interested in public health, some time ago staged a health week which is something for other societies to "shoot at."

Slips advertising health and periodic examinations were supplied to all the libraries to be given out with every book. Slips were distributed to druggists to be wrapped with every package. Health films were shown in all motion-picture houses, and posters secured from the Pennsylvania Tuberculosis Society were on display in prominent places—industrial establishments, store windows, etc. Health talks were started before service clubs, social clubs, parent-teacher associations, and other organizations. These were to be continued throughout the winter.

All these activities were preparatory to the meeting at which Dr. William P. Brown, medical secretary of the Pennsylvania Tuberculosis Society, spoke on the value of periodic health examinations and how they should be conducted. Dr. Brown spent a week in the county, and talked to the Rotary, Kiwanis, Lions, and various women's clubs.

This is an inspiring program, and it is hoped that other county societies may take up similar activities.

ENCEPHALITIS AND ITS EFFECT ON THE BEHAVIOR OF CHILDREN

The papers on this most interesting subject read at the last annual meeting of the State Society, and published in this number of the Journal, are surely among the best contributions that have appeared for a long time, dealing with the matter, as they do, from all angles, and bringing up to date the latest and best opinions and results that have so far appeared in print. Especially since the epidemic of 1918, many children have been sent to reform institutions who should have been sent to hospitals equipped to handle the temporary malbehavior from which they were suffering, and for the bad results of which they were more to be pitied than blamed. While it is fortunate enough that, as a rule, the intellect of these children is not permanently impaired, yet it is a fact that, at least for the time being, they are as helpless as though it were, unless they are fortunate enough to come under the observation of trained men and women who will take them away from their home surroundings and place them in an environment and under a discipline that will give them a chance, as it were, to lift the veil that is befogging their mentality. While it is true that just what happens to these little children following an attack of encephalitis is not clear, it is evident from the papers read at this symposium that the methods of correcting it are becoming very well understood, as shown by the good results obtained when these methods have been employed under the proper conditions, in the appropriate environment, and continued the necessary length of time.

Unfortunately, the principal factor in the solution of the problem is very difficult to accomplish; i. e., the establishment of institutions adapted to the handling of such cases, in charge of those best qualified to do the work. At the same time, if full advantage is taken of such institutions as are already in existence, and suitable cases, as pointed out by one author, are properly handled in their own homes, when the environment is favorable, much more can be accomplished than in the past, and many children will be spared being branded as criminals and punished therefor instead of being pitied as temporary incompetents and irresponsibles, and treated as such.

It has been the writer's experience that such cases may frequently be materially benefited in the open country (as, for example, on a farm) provided they are under the supervision of a person experienced in the handling of children, located where they may be frequently visited by a physician reasonably well versed in the treating of such cases, and the numbers are limited to a half a dozen or less. Much of the "back to nature" treatment that is thus available has proved of marked benefit in a number of cases, particularly when the children have come from neighborhoods and parts of the city where but little that is natural exists, and plenty that is artificial, and in many respects unfortunately ultramodern, surrounds them on all sides.

Parents are more to be pitied than blamed for their methods of handling their children, especially when it is remembered that many physicians fail to grasp the true meaning of the children's malbehavior, and unintentionally give the parents instructions for the correction of the newly acquired bad habits that only tend to increase the child's rebellion against the rules and regulations laid down.

There can be no doubt that the first and most important factor in the treatment of these cases is a change of environment, whether it be institutional and under the care of trained persons or not. An entire change of scene, or more particularly of companionship, especially, in many cases, of the parents themselves, will do much to give these children an entirely different viewpoint towards those around them and the world in general. Kindness, combined with intelligent discipline on the part of those in charge of them, plus the changed environment, will do much to restore these little ones to useful citizenship, without waiting for the establishment of institutions for this purpose.

RESPONSIBILITIES OF THE NEUROPSYCHIATRIST

The practice of the art and science of medicine carries with it the gravest responsibilities, responsibilities shared alike by practitioners and specialists. In evaluating the specialists' responsibilities, those of the neuropsychiatrist should not be overlooked.

Primarily, the neuropsychiatrist must possess not only knowledge, but must practice daily all the principles of medicine and psychology in the approach to an understanding of his patients, as well as the best corrective measures, which vary in almost every case, in the treatment of the individual patient. He also bears a very definite relationship to the patient's relatives, and must respect their feelings in the matter. Last but not least, he must consider the patient's future relationship to his business, society, and community, for whereas society may discuss over its teacups such questions as breakdowns, appendicitis, etc., confinement in a mental hospital is a different matter. Of course, such a viewpoint is entirely wrong, and thanks to mental hygiene, is being effaced.

Responsibilities weigh heavily in the matter of dealing with children, the mentally ill, decisions rendered in regard to school children, medico-administrative duties, and in expert testimony. In the matter of the patient, either child or adult, advice, studies, and counsel should be so planned as to insure the best procedure for the patient, the family, and society at large. This is at times exceedingly difficult, but, as in all other activities, the best fitted and trained succeed, and so it is with neuropsychiatrists.

The problem of the adult entails the same scientific procedures as that of the child. The neuropsychiatrist must be capable of interpreting examinations made by himself, his colleagues, and other specialists, that is, signs, symptoms, laboratory findings, eye examinations, genito-urinary examinations, etc., in order to understand definitely the patient with whom he is dealing. A thorough knowledge of treatment procedures is absolutely essential, and when and where to hospitalize is most important.

The growing child needing neuropsychiatric advice and counsel is a problem indeed. Here one must be fair to the child, the parents, the school, and society. Summed up, this responsibility is as great or greater than that of combating a high temperature or removing a kidney under aseptic surgical procedures.

The matter of court work, while expert testimony carries paramount responsibilities and in the light of community gossip has little standing, fortunately is in the control of each practicing psychiatrist, and he can take it or leave it. Many neuropsychiatrists are refusing this type of work, except when an opinion is requested by the Court itself.

In medico-administrative work (hospital work) the neuropsychiatrist is an administrator and scientist. He is responsible not only for a big business proposition, but for the thousands ministered to by his hospital annually. We are told by such executives that no one can appreciate these responsibilities except those who have held such positions.

And yet, neuropsychiatrists without murmur and unflinchingly, as a rule, are meeting their responsibilities with credit to themselves and the specialty they represent.

COMMENTS ON MEETING OF THE CONGRESS ON MEDICAL EDUCATION

In this issue of the JOURNAL will be found a report of the meeting of the Annual Congress on Medical Education, Medical Licensure, and Hospitals, held in Chicago in February. The change of the hotel where the meetings were held was a decided improvement. We cannot help but feel that if the morning and afternoon sessions were called on time, and a time limit placed on the reading of papers, more discussion would prevail, and after all, discussion is the life of a meeting.

It is of interest to note at medical meetings that the readers of papers too often use a pitch of voice that will not carry to those seated in the rear of the room, and by the time they are requested to speak louder, frequently valuable prefatory statements have not been heard. This fault is observed more than it should be in men who are teachers, and who are assumed to be trained in public speaking.

It is frequently observed, too, that when the reader of a paper injects side remarks, or turns to describe diagrams that are being used to illustrate the paper, these remarks invariably are directed in a lower tone to those seated in the front rows.

"GROWING PAINS" A FALLACY

The above is the title of an article which recently appeared in the *Columbus* (Ohio) *Dispatch*. When the lay press takes cognizance of such a condition, it is certainly time for the members of the medical profession to go out of their way to acquaint parents with the fact that "growing pains" undoubtedly are a fallacy. The article states that "normal growth is never accompained by pain, and that pain of any sort in any part of the child's body indicates that something is wrong." This surely is true, but equally surely is rarely recognized by the parents and all too frequently overlooked by the family physician, at least until a damaged heart reveals the true nature of the so-called "growing pains."

When one considers that such pains are practically always but an expression of rheumatism, in itself a serious disease, and especially in childhood, and also when one considers that the mildness of its symptoms is no criterion by which to judge the severity of the infection, one should surely attach more importance to these pains than is usual. One has only to come in daily contact with some of the little children suffering with crippled hearts to realize the damage that has already been done, and that, had the true nature of these pains been recognized at the time, followed by a careful inspection, and, if found infected, the prompt removal of the tonsils, this unfortunate and serious result might have been avoided.

It is unfortunate that these pains are frequently so mild, and of such short duration, that the parents fail even to bring them to the attention of the physician, but even so, if their true nature were always promptly recognized, sufficient importance attached to them, and the correct treatment therefore immediately outlined, it is safe to say there would be many less cases of heart disease in childhood.

ETHICS AND PHYSIOTHERAPISTS

We have published previously an account of the strained relationship between the physiotherapists and the medical profession in New York State.

We are now advised that in January the New York State Physiotherapists' Association, Inc., was formed. The avowed purpose of this Association is to clean up the vicious situation as it exists at present, and in the future to coöperate with the medical profession. The officers of the Association expressed approval of the action taken by the medical profession in eliminating undesirable and unqualified physiotherapists, and further, expressed its desire to assist the medical societies in ascertaining the proper schools to teach physiotherapy and to promote such reforms in the laws as may be necessary. They do not claim to be physicians, nor do they desire to have the title "Doctor." They strive for a closer understanding between physicians and physiotherapists for the best interests of the patient. The Association has decided that its members must not make diagnoses, this being the prerogative of the physician. Should an individual consult the physiotherapist first, he will be sent to a physician for diagnosis, and will not be treated by the physiotherapist except on the advice of the physician. A committee has been appointed by the Association to confer with representatives of the New York and Kings County Medical Societies. The membership is limited to those having State licenses.

This is a most commendable procedure upon the part of the physiotherapists of the Empire State, and shows an altruistic intention to do the right thing for the best interest of the one mostly concerned, the patient.

Any one who claims to make a diagnosis and treat an individual, we take it, is considered as practicing medicine, and no one has this privilege unless licensed so to do by the State. The physiotherapists are to be congratulated upon the stand they have assumed, that the physician not only must make the diagnosis, but recommend physiotherapeutic measures, and then refer the patient to a physiotherapist for further care and attention. We assume that the physiotherapist from time to time will have the patient return to the physician for further examination to ascertain what progress is being made, and for any additional suggestions he may deem expedient.

It is most laudable that the Association is not desirous of its members using the title "Doctor," which is always assumed by those not entitled to it expressly to mislead the public. The physiotherapist should refrain from giving opinions.

If, in the course of treatment, deep-seated painful areas and other conditions worthy of note are found, the physician should be advised, and not the patient, in order that the physician may determine the proper course and make appropriate suggestion for alleviation or cure. In this way, there will be no misunderstanding, and the relationship between the physician and the physiotherapist will be most harmonious, and the patient will receive effective care and attention.

We have a few masseurs and masseuses licensed in Pennsylvania who do not hesitate to give opinions to patients referred to them by physicians, and even to suggest a change of physician, or further, to advise discontinuing the physician so that they may have full charge. There is a question of ethics that these people must appreciate, if they are to continue in harmony with the medical profession.

BIOLOGIC PHYSICS

The Council on Physical Therapy of the American Medical Association has recommended that courses in biologic physics should be added to the curriculums of premedical schools; that courses in the medical school should be open to upper classmen and graduate students, and should be given by men who are familiar with physical principles, but whose primary interest is in therapeutic applications; that such courses would best be given in connection with hospital clinics; and that physical-therapeutic topics should be discussed in the current scientific magazines and before medical societies.

Unquestionably this is a step in the right direction, for scientists are thinking more and more in physical terms, and the most astonishing discoveries of the recent past have been made in the realm of physics. Just now we seem to be standing on the threshold of discoveries that will perhaps be as revolutionary in the practice of medicine as was the discovery of microörganisms. The whole conception of the universe is being revised. Life and function are being defined in terms of motion and electrical reactions, and matter is no longer thought of as an inert mass.

One of the subjects of particular interest to the medical profession of the near future will be that of "tuning." Wherever vibration or air or ether waves are a factor, tuning is a matter of greatest importance. Who is not familiar with the phenomenon of sympathetic vibration of properly tuned objects when a musical tone is sounded? The principle of the radio is based on tuning to receive various wave lengths. And so it probably will prove to be with infrared rays, visible light, ultraviolet rays, x-rays, the Milliken cosmic ray, and throughout the range of the electromagnetic spectrum which plays such an important part in the physics of today and will probably be equally important in the medicine of tomorrow.

We have suspected, without being able to prove it, that herein lies the solution of the cancer riddle. While it has been denied by some authorities, there is quite a weight of evidence to prove that light does have an influence in stimulating or retarding the growth of cancer, and that the x-ray is potent both to produce and to kill cancer is undisputed. So far as this is concerned, a wave phenomenon can be effective only where the receiving agency is tuned to respond, so that there is a vast field of research in the "tuning" of the various living tissues. The ears are tuned to respond to vibration rates of from 16 to 41,000 per second (varying with the individual); the eyes to respond to approximate wave lengths of from 3.9 to 7.6 ten-thousandths of a millimeter. Other end-organs perceive heat, others pressure, still others may be affected by the ultraviolet rays, so that it is not difficult to conceive that each tissue has its own fundamental vibration ratio which will respond to the waves within its range. Even the vitamins have been suspected of producing their effect by these means, and many of the processes of metabolism that are but dimly understood undoubtedly may be explained by this principle of nature.

When the facts of biologic physics are finally unraveled, many of the mysteries of medicine will be made clear. Let us hope the Council's recommendation will receive the welcome in educational circles that it deserves, and that no time will be lost in putting it into effect.

POOR APPETITE IN CHILDREN

While this may seem a strange subject for an editorial in a medical journal, based as it is on an article by Dr. C. A. Aldrich which recently appeared in *Mental Hygiene,* it is, in the opinion of the writer, of far greater importance than would appear at first glance. The article in question does not deal so much with whether or not a child's appetite is poor or good as it does with the methods so often employed to improve or correct an appetite that is poor, and these methods are so frequently entirely wrong both in principle and in application that an article on the subject by a man competent to write on it is of sufficient value to all physicians, and especially those handling large numbers of children, to warrant some editorial comment.

Doubtless, as the author states, many cases of poor appetite should be dealt with from the mental rather than the physical side. In fact, all cases in which no physical defect can be found to exist should be viewed as having a mental cause for the poor appetite. Forced feeding in children is undoubtedly wrong, and the cause of much regurgitation and vomiting, to say nothing of bowel disturbances, and a mental attitude toward food that tends only to aggravate the lack of desire therefor. Neither quantity, quality, nor variety will appeal to certain children at certain times, and to force them to take *anything* at such times would be bad enough, but to compel them to take *certain* things at such times would be much worse. There is perhaps no article of food that is forced into children in such large quantities as milk, and, while no one would deny its value as a food, undoubtedly much gastro-intestinal disturbance, accompanied by nausea, vomiting, and a pronounced aversion to milk, results from the misguided parents' attempt to get in a certain quantity per day at any price.

Undoubtedly, as the author states, the education of the parents is of the greatest importance in the correction of these cases, particularly if one bears in mind the great value of psychic influences in improving the condition. Under no circumstances, and at no time, should a child be urged, begged, coaxed, or bribed to eat, either anything or a certain thing, at a specified time, but on the contrary, may be permitted to eat something else that it will take willingly at that time. Such food is almost always well digested and enjoyed; whereas food taken under pressure and protest, even if it does not produce any untoward symptoms, will not be digested and assimilated, at least to the extent of nourishing the child, although in itself it may have contained greater nutritive value than the article of food the child preferred.

Parents should not talk before their children about the children having poor appetites, making such remarks as that they do not know what their children live on, as it is likely to stimulate in the child a feeling of importance that would tend to intensify its reluctance to eat. Neither should arguments take place, as the author well states, at the table during meal time, either in reference to some pleasant things that will accrue to the child if he eats, or to some unpleasant things that will result if he does not.

The statistics quoted by the author as a result of five years' experience with this subject are most interesting, and prove conclusively that the foregoing tactics (i.e., letting the child alone if he does not want to eat, provided one is satisfied there is no physical ailment at the bottom of the trouble) are far better than feeding by force or coercion on the principle that the child needs this or that article of food in order to be properly nourished, at the same time studying the psychology of the child, particularly in reference to his reasons for not eating.

THE DOCTOR AND LITERATURE

There are certain books that should be read by the physician which will afford him much food for thought, and will aid him materially in rendering more efficient service to humanity. One of these is *The Doctor Looks at Love and Life,* by Joseph Collins. "With great sanity and frankness the famous neurologist looks at the vital forces of life. He realizes the greatest pitfalls of sex are those of ignorance and explains much that has been misunderstood and misinterpreted. He recognizes in sex the great factor of our social being." With the modern novel running rampant on sex matters, and with the sex problem so strongly brought to the fore, the physician should have a further incentive to read this valuable contribution.

There are two other books by this author that every physician may read with profit: *The Doctor Looks at Literature,* and *The Doctor Looks at Biography.*

JOTS AND TITTLES

Scientific News

A SUBSTANCE CALLED PROVITAMIN which assumes vitamin activity when exposed to the ultraviolet ray has been discovered by Professor Windau, a German, Dr. Hess, an American, and Dr. Rosenhain, an Englishman, working together in Goettingen, Germany. A method of accumulating the substance, which is closely related to cholesterol, has been found, and it has been named ergosterin. After ultraviolet radiation it becomes rickets curative.

IT HAS BEEN REPORTED from Novisal, Jugoslavia, that Professor Adolf Hempf, chief of the local Epidemic Institute, has discovered a new treatment for hydrophobia, which last year was responsible for the cure of 3,063 persons who had been bitten by rabid dogs and cats.

ANNOUNCEMENT HAS BEEN MADE at the University of California that Dr. S. Maxwell, chairman of the division of physiology, by experiments with fish and frogs, has determined that the center of equilibrium and orientation is a tiny mass of pasty-white substance near the central chamber of the inner ear, known as the utriculum otolith.

AN ARTICLE IN THE *American Journal of Biological Chemistry* by Drs. Guy W. Clark and Paul W. Sharp, of the University of California, describes experiments with oöcytin. One part of this substance in half a million parts of sea water is said to start development

of unfertilized eggs of the sea urchin, although none of the individuals thus obtained have survived long. Oöcytin is present in the blood of a large number of animals, both male and female, but that from the blood of a male is apparently more efficacious in starting life processes. The experimenters are now interested in determining the exact nature of the substance, which appears to consist of purin bases and carbohydrates.

The Bell Telephone Company has recently demonstrated an electrocardiac machine by which the heart beat may be amplified so greatly as to resound throughout a large room. It is expected that this apparatus will be of advantage in demonstrating to students and at clinics.

Public Welfare

When an industrial community realizes that keeping the air clean is a project of magnitude similar to that of keeping the streets clean, providing clean water, removing city waste, or guarding the moral atmosphere, then there may be hope of success in smoke abatement, states O. P. Hood, chief mechanical engineer of the Bureau of Mines.

That all babies have a right to their "place in the sun" in order to be assured of normal growth, and that sunlight has the same health-giving qualities on the city fire escape as at the seashore is the message conveyed to mothers in the new one-reel film "Sun-Babies" which has just been produced by the Children's Bureau of the U. S. Department of Labor. The film requires about a quarter of an hour to show. "Sun-Babies" will be loaned by the Children's Bureau to responsible persons and agencies with the understanding that the borrower will defray express charges back and forth and guarantee the safe-keeping of the film. Those who desire to purchase the film may also apply to the Bureau for information and prices.

According to the *Pennsylvania Pharmacist*, Col. L. G. Nutt, Chief of the Narcotic Division of the Treasury Department, testified before the House Committee on Appropriations recently that the number of persons addicted to the use of narcotic drugs is decreasing. He estimated that there are about 100,000 narcotic addicts in the United States at the present time. He based his estimate on a survey by 300 field agents of the Department engaged in the administration of the Harrison Narcotic Act. Colonel Nutt's testimony that narcotic drug addiction is decreasing confirms Government reports submitted for a number of years past, yet in the face of these official reports paid "reformers" and "reform" organizations persist in representing that there is an enormous and alarming growth in narcotic drug addiction in this country.

More than 27,000 cases of smallpox were reported in the United States during the first ten months of 1926. The moral is obvious.

Activities of the Pharmacists

We quote the following from the *Pennsylvania Pharmacist:* The opening of the fiftieth fiscal year finds the Pennsylvania Pharmaceutical Association looking forward to the greatest year in its history. In 1926 a permanent headquarters was established in Harrisburg, centrally and conveniently located for service and legislative work. A monthly journal was inaugurated to provide the members with immediate and concise information and instructions concerning new Government regulations and the latest pharmaceutical news. Drugless drug stores have become more numerous and powerful, more drugs being sold by confectioners, grocers, and cigar stores, and great inroads have been made into the profits of the pharmacist. The Association has opened a campaign for the correction of these trade abuses.

MEDICOLEGAL AND LEGISLATIVE NEWS

Medical Practice Act in District of Columbia.—The Copeland bill recently reported out of Committee, provides for a licensing board of six physicians, who are residents of the District of Columbia, and three other persons who are not physicians, one of whom is learned in the law and an educator. This is interesting by way of comparison with our own One-Board Bill.

Right to Withhold Information Upheld.—In a recent ruling in the Scranton Orphans' Court, Judge M. F. Sando upheld an act passed by the State Legislature in 1907, which prohibits a doctor from disclosing any confidential information furnished by a patient that would tend to destroy the patient's character.

Award for Cure for Cancer.—Senator M. M. Neely, West Virginia, has introduced a bill in the Senate which would authorize an award of $5,000,000 for the discovery of a successful cure for cancer. The bill provides for the establishment of a commission of three eminent scientists, to be appointed by the President, who shall serve without compensation but shall be allowed their actual expenses while engaged on the business of the commission. The commission is authorized to ascertain the success of any cure for cancer that may be submitted to it, and $25,000 is appropriated for the current expenses of the commission.—*J. A. M. A.*

Federal Control of Medicinal Liquor.—According to the *Chicago Tribune,* unanimous approval of a bill giving the Treasury Department power to control the manufacture and distribution of medicinal liquors by private agencies was voted February 14 by the House Ways and Means Committee.

The new bill was reported to the House by Representative Hawley as a substitute for the proposals of Prohibition Enforcement Chief L. A. Andrews, which were rejected by the committee on the ground that they would have "put the government into the whisky business."

The bill empowers the Secretary of the Treasury to concentrate existing stocks of medicinal liquors in not more than six bonded warehouses and to issue permits to distillers for the manufacture of replenishments as they are needed.

Because it would compel direct sales from the warehouse to the retail druggist and require the bottles to be branded with the price paid by the druggist, the bill is certain to meet with objections from both wholesale and retail druggists' associations, who found their principal objection to the Andrews proposals in the fact that they also sought to eliminate the wholesaler in the distribution scheme and fix retail prices.

Chiropractic Bill Introduced.—Representative Grimes has introduced House Bill No. 925 to regulate the practice of chiropractic in Pennsylvania and provide for the appointment and maintenance of a board of chiropractic examiners. This has been referred to the Committee on Public Health. A bill (S-423) establishing a naturopathic examining board has also been introduced by Senator Heaton, and referred to the Senate Committee on Public Health.

Chiropractic Bill Opposed by New York Physicians.—According to the *New York Times,* at a recent hearing held in New York State by a legislative commission appointed to report on whether chiropractors should be licensed as physicians and standards set for their practice, Dr. Harold Rypins, secretary of the State Board of Medical Examiners, of New York, and one of five physicians to oppose state recognition of chiropractors as members of the medical profession, declared they were merely faith healers. Illustrating his opinion of chiropractic treatment with diagrams of "innate intelligence," "divine energy," and "universal intelligence," Dr. Rypins insisted that chiropractic was "more like Christian Science than like medicine or osteopathy." Both, he said, shared the doctrines that all existence was an imitation of God and as such was by its very nature perfect. He asserted that chiropractic found the opening for disease in the theory of Dr. B. J. Palmer, who maintained that the joints and flexibility of the spine allowed "interruptions to the divine cycle" of energy. Dr. Matthias Nicoll, Jr., head of the State Department of Health, joined in the attack on chiropractors. He called their treatments "foolish manipulations which do nothing but harm economically and physically." Representatives of the State Medical Society voiced their hostility to recognition of chiropractic.

Visual Tests for Drivers' Licenses.—While it is true that many people with defective hearing or eyesight have been driving automobiles for years without accident, it is also true that many accidents have been due to these handicaps, says C. E. Hill, Vice-President of the National Safety Council. Less than a dozen states make statutory reference to the eyesight of motorists. It is the hope of the National Safety Council that every State will enact the suggested model for a uniform motor-vehicle operators' and chauffeurs' act which was recommended by the National Conference on Street and Highway Safety. Under the provisions of this proposed law, officials have the right to refuse a license to any applicant who, in their opinion, is afflicted with or suffering from such physical or mental disability or disease as will serve to prevent the applicant from exercising ordinary and reasonable control over a motor vehicle. Vision surveys in several cities have brought out the fact that scores of persons driving automobiles have defective eyesight. Studies are now being made in some States to determine the definite relationship of defective vision to accidents. The increasing number of automobile accidents in Great Britain led to a study by experts resulting in the recommendation of minimum visual requirements for motor drivers in that country. Some safety students believe that similar visual standards should be adopted in the United States.

INDUSTRIAL MEDICINE

Silicosis.—The November, 1926, number of the *Journal of Industrial Hygiene* is devoted entirely to the subject of silicosis, and contains much valuable and interesting material giving the experiences and findings of English and South African workers.

E. L. Collis summarizes an article on the statistical characteristics of dust phthisis, as follows: Mortality records for England and Wales provide definite evidence that groups of workers experience high mortalities from bronchitis, pneumonia, phthisis, and chronic nephritis. This combination in the mortality records of any occupational group is statistically diagnostic of the presence of a silica-dust risk. Mortality from phthisis in an occupation with a silica-dust risk always exhibits its highest incidence late in life. Silicotic tuberculosis appears to be less infectious than ordinary tuberculosis. Among initial symptoms, dyspnea is given as the most marked and it so continues throughout the entire course of the disease. Other less frequent early symptoms are pleurisy, winter cough, or pneumonia. An intercurrent catarrh may first make the subject conscious of his dyspnea. Among late symptoms, dyspnea again is most prominent, with loss of weight in every case, lassitude and general weakness in most, cough with scanty sputum, and only occasionally hemoptysis. The author is undecided whether tuberculosis with silicosis is usually primary or secondary, but he states that the South African observers are rather inclined to the former view. Any tuberculous lesions certainly should exclude a worker from a silica-hazardous industry.

N. Tattersall, tuberculosis physician, Welsh National Memorial Association, presents a paper on "Clinical Manifestations of Silicosis," in which he says: "It is very important to remember that the onset of symptoms is usually slow and insidious. There is almost always a latent period of several years between the commencement of exposure and the onset of symptoms." He quotes a series of cases where the ages of men when first seen varied from 32 to 60, the duration of exposure to stone dust varied from one to 25 years, and the latent period from symptoms developed ranged from 3½ to 22 years, with an average of 10.6 years. The average latent period in South Africa is 9½ years.

E. H. Kettle, in an article on "Experimental Silicosis," seems to show that the condition is a direct chemical response to silica as such, and that silica in the lung favors development of tubercle bacilli. The report of the South African Miner's Phthisis Medical Bureau for the year ending July 31, 1924, states among other findings that early retirement from work does not affect the prognosis to any marked extent; that at least the great majority of cases of simple silicosis owe their earliest detectable development to the presence of an occult tuberculous element; and that tuberculosis with silicosis calls for immediate and compulsory retirement of the mine worker. The report emphasizes the importance of recourse to radiography in every case before deciding on the presence of silicosis. Heavy concentrations of silicious dust may produce the disease in two years. The effect is cumulative.

Industrial Medical Problems.—Many interesting problems are facing the industrial medical field today. One of the most important of these problems is that of educational preparation for this work. The vast majority of men now engaged in this work secured their training through the school of experience. They took their medical knowledge and their natural ability into the industry and there built up an experience upon which practically all of our information regarding the organization and administration of this activity is based. Until a physician has had this experience, he cannot understand or appreciate wherein industrial medical service differs from that of private practice. In the light of previous experience with teaching of industrial hygiene in universities and colleges, it is of interest to know that two more schools are investigating the establishment of such departments: the Massachusetts Institute of Technology in Cambridge, and Leland Stanford University in California.

Workmen's compensation laws and their application to medical problems are of perennial interest to industrial medical men. Aside from certain administrative

features, two problems stand out that are of interest to industry in all states. These are the provision of the law and the attitude of the industrial boards on the aggravation of a preëxisting disease, and similar conditions covering the employment of the handicapped, particularly the person who has lost one member and who would become a permanent total-disability case should the other member be lost or made useless. Decisions in such cases should rest on both fact and justice to both parties, but in many states this is not the case.

Our industrial first-aid methods need reviewing, particularly those regarding disinfection of the wound area and subsequent dressings. Almost daily new agents are offered for this purpose, and the results of the experience of the plant physicians would be desirable and valuable. In the daily experience of industrial physicians many valuable short cuts and efficient ways of conducting their work have been developed. Methods of treatment that have stood the test of time and experience, appliances that have shortened disability or made it possible for the injured worker to continue in his employment pending recovery, improved record-keeping methods, and similar items are of undoubted interest. Improvements in industrial medical practice will come about primarily from the experience of those engaged in this work. If no publicity is given to this experience, progress will be hampered. Surely no one can charge physicians in industry with being behind the times; more frequently do they point the way toward improved practice and stimulate their colleagues in the private medical field.

We have indicated only a few of the problems of interest to the profession as a whole. Industrial groups, such as iron, steel, mining, textile, etc., have many problems common to themselves. Also industries in the same locality have similar problems, yet different from those in another place.—*Bulletin of the A. A. I. P. & S.*, October, 1926.

The Use of Explosives Underground as Giving Rise to Carbon-Monoxid and Oxids-of-Nitrogen Poisoning.—Gehrmann and Ward state that blasting underground is today one of the well-known arts, and in the vast majority of cases no difficulties arise from the gases and smoke given off on detonation of the explosives. However, under certain conditions, injurious quantities of noxious gases may be produced and ability to recognize the presence of these gases is, therefore, of vital importance. The purpose of this bulletin is to point out some of the conditions which will produce bad fumes and to describe the symptoms which accompany carbon-monoxid or oxids-of-nitrogen poisoning as well as the first aid and aftertreatment for such cases. Because of their very nature, however, practically all explosives give off more or less carbon monoxid, the volume being normally dependent upon the type of explosive and the quantity shot. Moreover, there are certain conditions under which properly formulated and properly manufactured explosives will give off greater than normal quantities of noxious gases. Poor confinement of the charge in the bore hole will produce increased quantities of noxious gases and smoke, and also reduce the effectiveness of the explosive.

To obtain the best results from the standpoint of both fumes and execution, all bore holes should be tamped with suitable stemming. This is especially true in underground blasting in porous or seamy rock, for under such circumstances the rock offers less confinement than usual, and there is a tendency for the explosive to detonate at a lower velocity and with less complete combustion than it would in hard rock. The use of a weak detonator or of an explosive which has deteriorated in improper storage may sometimes cause the charge to burn in the bore hole. If a detonating explosive burns instead of detonating, the percentage of noxious gases in the products of combustion is greatly increased. In such cases, oxids of nitrogen are practically always formed, as evidenced by the red fumes given off. In the past, fatal accidents have been caused by breathing these fumes. To prevent charges from burning, care should be taken to protect explosives from deterioration, to use standard detonators, and to tamp holes thoroughly. When an explosive does burn, either in the bore hole or on the mine floor, ample time should be allowed to elapse before entering the place in order to pemit the fumes to be diluted and dissipated.

Proper ventilation of mines and tunnels has overcome a large proportion of the fume difficulties which existed in the past, and the importance of good ventilation for diluting the concentrated gases of explosion, as well as exhausting them to the surface, cannot be overestimated. While neither carbon dioxid nor nitrogen is poisonous, neither will sustain life, and they must, therefore, be diluted with fresh air. In tunnel headings where large quantities of explosives are sometimes shot, it is well to consider the exits for the concentrated powder gases. Simply supplying fresh air to the face is not always sufficient to prevent cases of fume poisoning, for if the gases are allowed to pass over the men, those more susceptible to carbon monoxid or oxids of nitrogen are likely to be affected. Where feasible, exhausters and blowers should be used in combination with each other for the best results. As pointed out above, it is impossible to eliminate all of the noxious gases from the detonation products of high explosives, and while they have been reduced to an absolute minimum in explosives recommended for underground work, it is advisable to exercise caution on entering the fumes immediately following a large tunnel shot, that is, of 100 pounds or more, where there is no escape for the gas except back through the tunnel itself.

PUBLIC HEALTH

The Pennsylvania Public Health Association met in Pittsburgh on January 21 and 22. Addresses were made by Dr. Theodore B. Appel, State Secretary of Health; Dr. W. G. Turnbull, Deputy Secretary of Health; Dr. Edgar S. Everhart, Dr. F. E. Coughlin, Mr. R. E. Irwin, and Mr. W. W. White, of the Department of Health; Dr. Charles H. Miner, Ex-Secretary of Health; and others. The following officers were elected for the ensuing year: president, Dr. C. J. Vaux, Pittsburgh; first vice-president, Dr. Howard C. Frontz, Huntingdon; second vice-president, Mr. C. B. Auel, Pittsburgh; secretary-treasurer, Dr. Edgar S. Everhart, of the State Department of Health; assistant secretary-treasurer, Miss Alice M. O'Halloran, also of the State Health Department. Dr. Appel was elected a member of the executive committee, the other members being Dr. R. C. McKay, Sunbury; Dr. Catherine Law Wright, of Erie; Dr. John M. J. Raunick, Harrisburg; and Mr. Thomas W. Henderson, Washington, Pa.

The Engineering Bureau of the State Health Department has announced its plans for the highway water supplies for the next season. One thousand additional miles will be covered, and a third mobile

laboratory will be added to the two field laboratories previously engaged in this work.

Representatives of the dairy industry in the State of Pennsylvania recently met in the office of Secretary of Health, Dr. Theodore B. Appel, upon the invitation of the State Departments of Health and Agriculture. This conference was called for the purpose of drafting necessary legislation and regulations further to control the milk problem in Pennsylvania.

Pennsylvania's Sanitary Water Board is now composed of the following: Dr. Theodore B. Appel, Secretary of Health, chairman; Judge Thomas J. Baldrige, Attorney General; William D. B. Ainey, Chairman of the Public Service Commission; Charles E. Dorworth, Secretary of Forests and Waters; and Nathan R. Buller, Commissioner of Fisheries. W. L. Stevenson, Chief Engineer, State Health Department, is its secretary.

The first meeting under the new administration brought forth four major policies for the purpose of guiding the Board and Pennsylvania's citizens generally in the contemplated activities of the next four years. The resolutions as adopted follow:

WHEREAS, It is essential for the Sanitary Water Board to determine certain basic policies for its own guidance, and

WHEREAS, It will facilitate the business of the Board with the public, the municipalities, and the industries of Pennsylvania if they be informed of such policies; therefore, be it

RESOLVED. That the following basic policies be established by the Sanitary Water Board:

(1) Public Sewers. Municipalities should have prepared, adopt, and submit to the Board for approval comprehensive sewerage plans and financial programs for the progressive construction of intercepting sewers and sewage-treatment works, if the latter have been required.

(2) Classification of Streams. The Board will diligently proceed, so far as available funds will prudently permit, with the field surveys required to obtain the physical and scientific information needed by the Board to designate streams as Class A, B, or C in accordance with the resolution of the Board adopted August 8, 1923.

(3) Coöperating with Industry. The Board intends to carry out the letter and also the spirit of the 1924 agreement with the leather tanners of Pennsylvania and the 1926 agreement with the pulp and paper makers of Pennsylvania for investigation of industrial-waste-disposal problems. The Board invites like coöperation with all other industries which are confronted with the problem of treatment and disposal of industrial wastes to abate stream pollutions.

(4) Legislation. The Board looks with favor upon constructive anti-stream-pollution legislation, in accordance with the above principles, which will be helpful in carrying out a comprehensive plan for the sanitary conservation and prudent utilization of the water resources of Pennsylvania, including a recognition of the varying uses and conditions of streams and the well-being and prosperity of the municipalities, industries, and citizens of this State. The Board will look with disfavor upon legislation destructive to coöperation between the Board and municipalities and industry because such coöperation is believed to be the most practicable solution of the problem of improving the waters of the State.

Good Health Year in 1926—Health conditions among American and Canadian wage earners and their dependents in 1926 were good, the death rate being 8.8 per thousand, according to a bulletin issued by the Metropolitan Life Insurance Company. The course of the death rate among Metropolitan policyholders has always proved to be a reliable index of what is transpiring among the general population, the mortality statistics for which are not obtainable until approximately a year after the figures for the insured group become available.

As an indication of the progress which has taken place in the sanitary history of the industrial population within a period of sixteen years, attention is called to the fact that the 1926 death rate was 29.5 per cent below the 1911 figure. Between 1911 and 1925 the death rate in the general population declined only 15 per cent, as compared with a drop of 32.5 per cent among their policyholders.

The very satisfactory health record for 1926 was made despite a bad beginning. By February, the influenza situation had become a conspicuously unfavorable item in the health record. Even though the type that prevailed was generally not virulent, it resulted in a marked rise in the death rate for all causes combined. In March and April the mortality from heart disease, chronic Bright's disease, and cerebral hemorrhage was much in excess of that recorded in the corresponding months of 1925. This is a repetition of what has happened in other outbreaks of influenza when the deaths of thousands of persons who had chronic degenerative disorders were hastened. An unusually severe and widespread outbreak of measles was another item in giving 1926 a bad start from the health standpoint. The mortality from whooping cough was also considerably above the average.

The year 1926 established "best records" for a number of diseases of major public-health interest. Typhoid fever reached a new minimum, with a death rate of 4.2 per 100,000. Scarlet fever repeated its minimum rate of 3.4. Diphtheria established a new low point of 9.5. Diarrheal diseases declined to the minimal figure of 10.5, while diseases of pregnancy and childbirth declined to 15.6 per 100,000—well below the former minimum (16.9) established in 1925. Puerperal septicemia and albuminuria also registered new low points. For the second time in the history of the American and Canadian industrial populations, the death rate for tuberculosis was below 100 per 100,000.

The measles rate was 8 per 100,000, more than triple the figure for 1925, and there was a 40 per cent increase in the rate for whooping cough, its mortality being the highest recorded since 1920. These high rates should be interpreted in the light of the tendency of these diseases to increase and decrease in cycles of from three to five years. The new minimum rate for diphtheria is perhaps the greatest single sanitary accomplishment of 1926.

Cancer presented a death rate of 74.9 per 100,000, the highest ever recorded among the policyholders, one death out of every 12 from all causes being due to this disease. The most recent research has demonstrated beyond doubt that the general tendency of the cancer death rate is upward. The heaviest share of this increase fell on white males, with colored males next in order, and a significant increase was also observed among white females. Among colored females there was a slight upward tendency. Significantly upward trends were shown for cancer of the stomach and liver, the peritoneum, intestines and rectum, and the breast.

The death rate from diabetes (17 per 100,000) was the highest ever recorded among the policyholders with the exception of 1922. With the inauguration of the insulin treatment in 1923 there was a gratifying drop in the death rate which continued through 1924, and we were hopeful that the declining tendency would persist. We must now, perforce, conclude that insulin has not effected any lasting favorable change in the

mortality from diabetes, although it is possible that without it, the rate would have increased more rapidly than it actually has.

The mortality from organic heart disease increased 5.7 per cent as compared with 1925, and there were smaller increases for chronic nephritis and cerebral hemorrhage.

Alcoholism caused 638 deaths, an increase of more than 23 per cent over the previous year, and the highest rate recorded since 1917. Unless the current trend is checked, by 1928 the death rate from alcoholism will be as high as any year since 1911—the earliest for which data are available for the industrial population.

Accidental deaths accounted for 7 per cent of the mortality from all causes combined. There was a slight decline in the homicide rate in 1926, but the suicide rate increased 11.4 per cent over 1925—the highest figure since 1917.

An International Health League.—The advisability of founding an International League of Health was discussed by leaders of the public-health movement in this country at a luncheon given by Miss Olga Nethersole, founder of the People's League of Health of Great Britain. Among those who favored the project were Dr. Livingston Farrand, president of Cornell University, Dr. William Welch, director of the School of Hygiene and Public Health, Johns Hopkins University, and Dr. Lindsley R. Williams, managing director of the National Tuberculosis Association. Dr. Farrand said: "We would all welcome some way to reach a unity of action, both national and international, in the field of public health. We are overorganized in this work in America, and for the last ten years we have been seeking some way in which to coördinate the many official and nonofficial organizations which are working against disease. If the International League of Health can accomplish this unification it will be performing a valuable service." Miss Nethersole, who founded the People's League of Health in 1917, under the patronage of King George, said her purpose was to internationalize the scope of her organization. "We have met together," she declared, "in the furtherance of the future peace of the world by bringing about a better understanding between the two great English-speaking nations."

International Drug-Control Conference in Washington.—An international conference in Washington to study means of combating the growing illicit trade in habit-forming drugs, was unofficially suggested at Geneva, Italy, in January. Members of the League of Nations undoubtedly would prefer Geneva, but it is believed that Premier Mussolini for one is ready to go to Washington, or anywhere, unless the League succeeds in achieving results by stopping overproduction in accordance with the Hague Convention. Premier Mussolini gave warning that the time has arrived to establish a ration system, and to limit the factory output of narcotics in each country to medical and scientific purposes, thereby supporting the recent American note to the powers urging stricter observance of the Hague Convention. Another suggestion emanating from Italian sources is to place drug control entirely in the hands of the League of Nations. This suggestion, however, has raised the question of whether Washington would accept such a proposal. Adherence of Bolivia to the Geneva Opium Convention was announced with the reservation that Bolivia will not undertake to restrict the cultivation and production of the coca leaf in her territory nor to forbid the consumption of the leaf by the natives. The unofficial suggestions in Geneva for an international conference in Washington on control of illicit drug traffic came as a complete surprise to officials in Washington. They admitted deep interest, however, not in the Washington-conference suggestion alone, but also in the significance it might have as indicating crystallization of opinion abroad in line with practical questions brought up in the recent American communication. Although Italy has not played a conspicuous part at the international conferences on opium control, her representatives have usually supported the American position. Italy and the United States apparently have much in common in their fight on opium. The poppy industry is not a consideration in the colonies of either country. The chief problem for each is to curtail home consumption. Their identity of interest was set forth when Italy stood with the few supporters of the American request for an increase of agenda at the last conference.

At the New York Tuberculosis and Health Conference held in New York City in January, Surgeon General Hugh S. Cumming, of the United States Public Health Service, stated that the application of the medical knowledge now available to the problems of public health is even more important than research work into the causes and prevention of disease. President Livingston Farrand, of Cornell University, stated that progress in public-health education is necessarily slow. Frank R. Rogers, director of the State Bureau of Physical Education, urged the creation of a central agency to provide teachers with suitable material for health education. He said too much of the material on health taught in the schools was based upon opinion rather than scientific data. Dr. Doris A. Murray, head of the maternity, infancy, and child-hygiene work of the Cattaraugus County Health Department, said seventy per cent of expectant mothers in the United States are without advice or instruction before the birth of their babies, and between twenty and forty per cent have no medical attention at childbirth. She declared that as a result of these conditions there has been no appreciable decline in the deaths of infants from congenital causes influenced by prenatal conditions in the last seventeen years. Among others at the conference was Olga Nethersole, the actress, who is now devoting herself to public-health work. She is the founder and organizer of the People's League of Health of London, and is endeavoring to raise a fund of $500,000 for its endowment.

A warning against a false sense of security in regard to public health, which, he said, had caused the United States to be the most poorly vaccinated country on earth, and a plea for emphasis on the prolongation of life and the decrease of the death rate, were uttered by State Health Commissioner Matthias Nicoll, Jr. The Commissioner also deplored the tendency to place mandatory health legislation on the statute books, asserting that public-health education was the only effective way to meet health problems. Dr. Nicoll asserted that an incalculable number of lives were being saved by public-health work and improving living conditions, but he said there was room for great improvement. "No achievement in public health is more frequently alluded to than the phenomenal decrease in deaths from tuberculosis in the last two decades," he said. As a matter of fact, from the standpoint of public health, control of tuberculosis was, with notable exceptions, far from satisfactory.

Asserting that there has not been a "good State census in the last fifty years," Professor Walter Wilcox, of Cornell University, told the delegates that, al-

though sufficient appropriations had been made for the census, much of the information had not been tabulated because the Legislature had confined its interest in the census to the reapportionment of seats. The first year of a five-year campaign to free New York from diphtheria has met with marked success, Dr. Nathan B. Van Etten, Chairman of the Diphtheria Prevention Committee, told the delegates. Diphtheria cases in 1926 fell off 26 per cent from 1925, as against a decline of only 9 per cent the year before, he asserted.

Influenza in Europe. Under date of January 10, 1927, a cablegram was received from the Health Section of the League of Nations regarding influenza in Europe, giving data as follows: Official telegraphic information now received regularly by the Health Section of the Secretariat of the League of Nations shows no unusual prevalence of influenza in Sweden, Germany, Czechoslovakia, Italy, Scotland, or Ireland. A mild form of the disease is prevalent in Holland, Belgium, and Norway. An epidemic of the disease, mostly mild in character, is reported in southern Jutland, and Fyen, in Denmark. The epidemic in Switzerland was highest in Basel, Geneva, and Bern. It is now decreasing. The deaths occurred mostly among old persons. The disease is prevalent in central, eastern, and southern France. It reached its maximum in Paris the middle of December. During December 332 deaths from influenza and 1,300 deaths from respiratory diseases were recorded in Paris. In England the general death rate increased during the last week in December, but serious prevalence of influenza was not reported. In Spain the disease is generally benign. The epidemic started at the beginning of December in the northeastern provinces and reached Madrid three weeks ago. The League of Nations has not been notified of any frontier measures. —*Public Health Reports,* January 14, 1927.

HOSPITAL ACTIVITIES

When winter is about to descend on the farms and hamlets of New England, the farmer sees to it that his cellar is tight; that the house is well banked with leaves, or even manure; that shrubbery and rose bushes are protected with straw casings; and that vegetables are deeply buried in the ground. Cold weather often plays havoc with the hospital repair bill. The thrifty hospital administrator has long since protected his shrubbery from the icy fingers of Jack Frost. But when thawing days are interspersed with freezing nights, eave spouts and rain conductors are likely to become closed by the freezing of trickling water. Attention to this matter may save many dollars. Exposed water pipes in cellars and unprotected water lines to toilet fixtures in outlying structures should be protected from the cold. The covering of steam pipes, where the insulation has been lost as a result of exposure to the weather, also will save dollars in the coal pile.—*Modern Hospital.*

Is It Safe to Treat, in a General Ward, Patients Suffering With Lobar Pneumonia?—Unfortunately, not a few institutions, particularly those with less than one hundred beds, are unable to provide separate wards for these patients. It does not appear to be a wise hospital procedure to care for pneumonia patients in close contact with other patients. Separation by screens of muslin or other material is indicated, if no separate ward is procurable. If there is no doubt of the fact of the transmissibility of pneumonia to healthy individuals, then it would appear reasonable to suppose that this danger is multiplied when those in contact with the disease are physically below par because of the existence of other ailments. If an actual home quarantine of patients suffering with lobar pneumonia is ever justified (and this is the practice in a number of large cities), certainly the hospital should lead the way in establishing a proper institutional isolation of these patients.—*Modern Hospital.*

Grading Committee Adopts Official Program.—The Committee on the Grading of Nursing Schools at a recent meeting adopted a five-year program and budget. The program calls for frequent publications, as rapidly as helpful material can be gathered and put in shape. Some definite publication is planned for each year of the Committee's life. As a first step in this policy of frank publicity, the Committee, as soon as it had adopted its five-year program, voted that the program should be printed and made available to the allied professions. The committee has taken as its function "The study of ways and means for insuring an ample supply of nursing service, of whatever type and quality is needed for adequate care of the patient, at a price within his reach. The actual grading of schools, that is, is to rest upon a foundation of broad and careful study." During the first and second years the Committee plans to make a careful study into problems of the supply and demand of nursing service. In the third and fourth years attention will be concentrated upon the problem of "What are the essentials in running a training school?" The actual grading of nursing schools will start in the first year and will continue throughout the five-year period, with the fifth year devoted almost entirely to the problem. If present plans are followed, a few simple questions will be asked each school year. The material will be gathered and tabulated. For the first year or two, at least, and perhaps longer, no public statements will be made as to the individual standing of any school. Any school that wishes to know how its practices compare with those of other schools, however, will be given a confidential report by the grading committee.—*Modern Hospital.*

A Common Cause of Hospital "Problems."—A person who attends a number of hospital conventions in the course of a year recently hazarded the opinion that a great many of the so-called problems and difficulties that trouble superintendents and executives can be traced to indifferent or faulty organization of the hospital. He further says that the principal fault lies in the failure to define the rights and authority of the superintendent to the board and to the staff. A glance at some of the questions asked at meetings would tend to support this statement. In the hospitals that are well managed, difficulties that are more or less frequent in other institutions could never arise because the members of the staff and the executive personnel know exactly the rights and authority of the superintendent, and when any misunderstandings arise the decision of the superintendent is final. In many cases such misunderstandings are adjusted by the individuals involved, based on their understanding of the views of the superintendent. Properly defined organization also would outline the duties and responsibilities as well as the limitations of department heads, and thus tend to eliminate friction or overlapping of activities. The same type of organization would define the rights and responsibilities of staff officers and members, and enable the staff to avoid misunderstandings. How does this assertion sound to you? How many hospital problems of which you have heard would never have arisen if the

hospital had definitely outlined the duties and authority of the different executives?—*Hospital Management.*

ANNUAL CONGRESS ON MEDICAL EDUCATION, MEDICAL LICENSURE, AND HOSPITALS

The annual congress was held at the Palmer House, Chicago, Ill., February 14 to 17, 1927. The program was devoted to the activities of the Council on Medical Education and Hospitals, and the Federation of State Medical Boards.

The following is an abstract of the papers read at the sessions of the Council, excluding three papers on postgraduate teaching.

The proceedings of the Council and the Federation of State Medical Boards will appear in the *Journal of the American Association.*

Dr. Arthur Bevan: The Need of Teaching Medical Ethics.—This title was chosen by Dr. Bevan, because the Board of Trustees of the American Medical Association had requested the Council on Medical Education and Hospitals, to make a recommendation to the medical schools to incorporate a course of lectures on medical ethics in the medical curriculum. Dr. Bevan stated that the time had arrived to educate medical students and the medical profession in this very important subject, and that the students must be taught by precept and example. A new era in the development of the profession in which character and honesty would form an important part in every medical-school curriculum was called for, and the profession was severely criticised for fee splitting, the undertaking of unnecessary operations, and the misuse of the liquor-prescription privilege. A medical man should never perform an operation on a patient which he would not want to have done upon himself under the same circumstances. Another evil which has become a glaring disgrace is serving as expert witnesses who give partisan testimony for pay, a custom which has brought ridicule on the whole profession.

Dr. Franklin C. McLean: The University and Medical Education.—Dr. McLean said that the University set standards to prepare students for the general practice of medicine. He urged that less didactic teaching be done, and the student be required to do more study, and work out his problems in the dispensary, at the bedside, in the laboratory, and in the library. Superficial thinking and superficial examinations are no longer to be tolerated.

Dr. Charles F. Martin (Canada): The Trend of Medical Education.—Dr. Martin referred to pedagogy in medical teaching. He urged that a working knowledge of French or German should be required during the premedical preparation, and suggested holding down the number of hours devoted to the curriculum and spending more time in developing the student. He recommended a uniformity of control among the states in regard to licensure, and said that the classification of medical schools should be based upon their fitness to prepare for the general practice of medicine.

Dr. Ray Lyman Wilbur: Altering the Medical Curriculum.—Dr. Wilbur stated that the curriculum was unimportant, and the specialties a curse. There are too many lectures. A didactic course is obsolete, and should be abolished, and no examination should be given based on a didactic course. All examinations should be practical. There should be more work done by the student, and less by the faculty. He recommended that anatomy, physiology, bacteriology, biologic chemistry, and hygiene be taken out of the medical curriculum and made a requirement of the premedical course. These subjects would well fit in with general education. If this was done, then the medical school should be able to prepare a student for the practice of medicine by requiring a course of three calendar years, which would include the intern year (with one month's vacation each year). He considers that the ordinary specialist as a teacher is a menace to the student. He further thinks that the president of each university should make an annual review of every department, and where the teaching personnel was not continuing up to date, a change should be made.

Dr. Evarts Graham: Teaching of Clinical Work to the Undergraduate.—Dr. Graham based his observations on his viewpoint as a surgeon. He said, why prepare students for things they do not do? They should be prepared from the standpoint of general practice, notwithstanding the fact that he believes only about 25 per cent enter general practice, the remainder claiming to be specialists. Students should be required to devote more time to fundamentals, the bedside, the library, research, and the laboratory. They should know how to use every instrument of precision for making a diagnosis. The rôle of schoolmaster has no place in teaching clinical medicine. More time should be devoted to the teaching of convalescent and postoperative care. Operating clinics lasting for an hour or two, with the students coming and going, were deplored. Students should be required to assist at operations instead. The teaching of operative surgery on the cadaver is useless, because many of the operations will never be done by the student when he enters practice, and the teaching is done under conditions that will not be found in life.

Dr. William J. Mayo: Medical Education for the General Practitioner.—Dr. Mayo stressed the need of the medical school to prepare the student body for the general practice of medicine. He, too, urged that the course in medicine be shortened. He cannot see why grown young men and women should have three months' vacation "in a world on a twelve-months' working basis." Community clinics were recommended by which physicians may give each other the benefit of specialization, which also would provide a means of taking care of charity work, and normal fees paid by patients would go toward the support of the clinic.

Dr. Walter S. Leathers: The Place of Preventive Medicine in a Medical School.—Dr. Leathers outlined the teaching of this subject by lectures, laboratory exercises, and field demonstration, stressing the latter.

Dr. Walter C. Rappleye: Preliminary Report of the Commission on Medical Education.—An extended account of this report will appear in a later number of the JOURNAL.

Dr. Frank B. Granger: A Hospital Department of Physical Therapy.—This paper outlined the very extensive and expensive department of the Boston City Hospital, Boston, Mass.

Dr. George E. Follansbie: The Duty of the Hospital Staff to the Intern.—Reference was made to the personal clinical instruction, clinical conferences, and the relation of interns to private patients.

Dr. N. P. Colwell: The Hospital's Function in Medical Education.—This paper reviewed what had been accomplished by the Council in improving medical schools and hospitals. It outlined the functions of hospitals, and the necessity was stressed for maintaining high-grade hospitals.

THE MEDICAL SOCIETY

OF THE STATE OF PENNSYLVANIA

OFFICERS' DEPARTMENT

WALTER F. DONALDSON, M.D.
Secretary
8062 Jenkins Arcade Building
Pittsburgh, Pa.

FEBRUARY MEETING OF THE BOARD OF TRUSTEES

At the February 1st meeting of the Board of Trustees, the resignation of Councilor and Trustee Theodore B. Appel having been accepted, Dr. Frank G. Hartman of Lancaster was elected to succeed Dr. Appel as Councilor for the Fifth District until October 5, 1927, at which time the House of Delegates will elect a councilor for the district to serve until October, 1928.

The Board unanimously adopted a resolution instructing the Secretary to add the following to application blanks distributed to component societies to be used in considering candidates for membership:

I have not previously held membership in any component county medical society except in ..... county society, state of ..... in 19..... I was transferred (or resigned in good standing, expelled, or suspended) from the above society in 19.....

The Finance Committee in their report approved of the plan of the Benevolence Committee of the State Society to raise additional funds for the Society's Benevolence Fund.

Chairman Sharpless announced the continuation of the Legislative Committee of the Board with the following personnel: Arthur E. Crow, Uniontown; Donald Guthrie, Sayre; and Frank G. Hartman, Lancaster, Chairman.

THE MACKEY DECISION

It is our belief that the "Mackey Decision" is the title commonly given to the decision of the Workmen's Compensation Board in the case of Coxe vs. Yost Traveling Grate Company, 7 Penna. Workmen's Compensation Board Reports, page 170. Regarding this case of Coxe vs. Yost Traveling Grate Company, we quote Commissioner Houck as follows:

> "That case stands for this principle: Where an employer sends his injured employee to a hospital, a member of that hospital staff, who in his ordinary and usual service to that hospital as such a staff member, performs an operation or personally attends the injured employee, cannot collect a professional fee for this service in addition to the usual and ordinary charge which the institution makes for its service to the patient."

However, in connection with the case in which Dr. P. C. Walter, of Harrisburg, brought suit for his fee for services rendered, in addition to the bill rendered by the Harrisburg Hospital, Commissioner Houck further says that "the principle of the Coxe case is not to be extended beyond its own facts. We have now to inquire whether the Coxe case controls the case at bar."

The Commissioner states in his opinion: "Of course, in no instance can a duplication of charges be countenanced. If the staff physician is actually remunerated by the hospital for his services to the patient, that is an end of the inquiry. But that is not this case. Here the hospital bill includes only these items: Occupancy, 27 days @ $3.00, $81.00; for operating room, $10.50; for routine laboratory service, $5.00. The hospital bill includes no charge for the service of the physician. It is conceivable that the hospital could properly make a charge for the services of the physician. If that had been done, would not the employer be obliged to pay the bill? We do not see that it makes any difference, on the question of liability, whether the charge is included in the hospital bill or is made separately by the physician by express permission of the hospital."

The Workmen's Compensation Board in District No. 4 has therefore "reversed the decision of the Referee and decided that Dr. Walter was entitled to a fee of $100.00 for his services rendered to the claimant *in addition* to the hos-

pital bill of $96.50 paid to the Harrisburg Hospital.

Mr. B. J. Myers, Legal Counselor, in reporting the above important decision to the officers of the State Society, writes as follows:

"This opinion was written by Paul W. Houck, Commissioner, and concurred in by Chairman Walnut and Commissioner Morrison. I do not know whether the Travelers Insurance Company, which is the insurance carrier of Brann & Stewart Company, the defendant, will appeal this case to the Superior Court or not. I hope they will, so we can have the matter definitely determined. It seems to me the Commissioner's ruling is in accordance with the Workmen's Compensation Act and reason and justice in the case."

SCIENTIFIC EXHIBIT

The February 1st meeting of the Committee on Scientific Work for the 1927 Session held at Harrisburg was attended by all members of the Committee, including Chairman J. C. Burt and Secretary B. A. Thomas of the newly created Section on Urology. The enthusiasm of the Committee members and the completeness of the programs proposed in each Section forecasts an unusually attractive Session. Each Section was pledged to responsibility for at least one demonstration of some clinical procedure as a feature of the 1927 Scientific Exhibit.

NEW SECRETARIES

We have the pleasure this month of presenting the names of seven new county medical society secretaries, as follows:

Bedford County—Charles C. Cooner
Carbon County—John F. Boyer
Clinton County—David W. Thomas
Erie County—Joseph A. Stackhouse
Greene County—W. Burnett Clendenning
Lebanon County—John D. Boger
Venango County—P. Emery Huth

These officers are undertaking a service to their fellow members which is unremunerative, except as it offers opportunity for development of executive ability. The scientific, economic, and social standing of the organizations represented during the tenure of the above-mentioned secretaries will in their respective counties largely reflect the managerial ability of each secretary.

When John F. Davis, retiring secretary of the Venango County Medical Society, took office in 1910, the society had fifty members. Thanks to the energy of Dr. Davis, the society for the last seventeen years has more than held its own with other societies throughout the State. The same may be said to be true of Drs. Jacob A. Trexler and Harry C. Scott, who have served ten years in Carbon and Greene County Societies, respectively.

CANDIDATES FOR THE 1927 HONOR ROLL

On February 23, 1927, this office had received the annual assessment of 3,788 members; on the same day 1926, 3,483; on the same day 1925, 3,886 members.

The percentage of 1927 dues received at this office February 23rd from certain medical societies is herewith indicated: Montour, 100%; Union, 100%; Greene, 93%; Elk, 91%; Montgomery, 84%; Franklin, 83%; Mercer, 81%; Chester, 80%; Potter, 79%; Susquehanna, 79%; Center, 78%; Delaware, 78%; Schuylkill, 78%; Adams, 77%; Berks, 76%; Mifflin, 71%; Dauphin, 70%; Huntingdon, 70%; Cumberland, 69%; Somerset, 65%; Cambria, 64%; Bedford, 63%; Bucks, 63%; Lycoming, 63%; Blair, 60%; Columbia, 59%; Carbon, 57%; Washington, 57%; Butler, 55%; Clinton, 55%; Wayne, 55%; Northampton, 55%; Northumberland 53%; Clearfield, 53%; Armstrong, 50%; Fayette, 50%; Lawrence, 50%; Lebanon, 50%.

PENDING LEGISLATION

The Board of Governors of the Pennsylvania Chiropractors Association, seven in number, not one of whom is legally licensed to practice in Pennsylvania, has published the statement that "chiropractors cannot obtain a license to practice their profession in Pennsylvania, yet they can be convicted for not having a license." As a matter of fact, scores of practitioners classified in the telephone directories throughout Pennsylvania as chiropractors have been legally licensed by the State of Pennsylvania to practice drugless therapy. Their names appear in the 1926 list of registrants published by the Department of Public Instruction.

Conscious of the fact that they lacked the preliminary education and necessary professional education and training to undergo successfully adequate examinations in anatomy, histology, pathology, chemistry, pathology, diagnosis, hygiene, and public health, hundreds of unlicensed chiropractors in Pennsylvania, under the leadership of the above-mentioned Board of Governors, again appear before the Legislature seeking the passage of legislation creating a special board of examiners and automatic licensure for present practitioners.

We commend to the lawmakers of this State consideration of the following truism: Healers disclaiming the use of drugs or medicine, internally or externally, in the treatment of human ailments or diseases, should none the less be well qualified in fundamental knowledge leading to the proper recognition of the causes of such ailments.

In the State of Michigan since 1913 candidates for license to practice chiropractic and candidates for license to practice medicine have taken the same examination, at the same time, from the same board, in the above-mentioned fundamental studies. Regarding the Michigan Practice Act, a decision of the Michigan Supreme Court states that

(a) It is within legislative power to require persons treating human ailments without the use of drugs to possess knowledge of organic structure, atomic organisms, science of disease (pathology), recognition of disease by its symptoms, and science (public) of health.

(b) This power has been exercised.

(c) We can conceive of no deprivation of the equal protection of the law in requiring drugless healers to understand the subjects mentioned. The fact that the defendant (a chiropractor) has not received instruction in some of these subjects offers no objection to the validity of the law.

(d) Chiropractors may feel that a knowledge thereof is unnecessary and unused in their school of practice, but this affords no reason for requiring the Legislature to enact laws not in conformity therewith.

(e) We decline to indict the medical profession of design to annihilate the system of chiropractic adjustment, and the Legislature of supinely surrendering its lawmaking power in aid thereof.

The creation of an examining and licensing board, nondesignate in character, should relieve future Pennsylvania legislators of the biennial annoyance of considering bills dealing with the creation of special licensing boards for chiropractors, naturopaths, and other cults yet to be.

In March, President-Elect Morgan visited the Erie, Crawford, and Lawrence County Medical Societies; and in April, he will attend meetings of the Allegheny, Washington, Greene, and Beaver County Societies.

Members are reminded that the Secretary is prepared to forward, in response to requests, a legal release blank to be used when treating fractures, dislocations, or foreign-body cases in which it is impossible for any reason to obtain adequate x-ray pictures to assist in correct diagnosis and treatment. Any time within two years of your treatment of such a case, you may be sued for alleged malpractice. X-ray records in support of your diagnosis and treatment may prove invaluable.

CHANGES IN MEMBERSHIP OF COUNTY SOCIETIES

The following changes have been reported to February 15:

Adams: *New Member*—Walter S. Mountain, Jr., New Oxford.

Allegheny: *New Members*—Frederick V. Wucker, 4300 Butler St., Pittsburgh; Theodore C. Zeller, 605 Locust St., McKeesport. *Reinstated Member*—Ernest W. Logan, 2006 Beaver Ave., N. S. Pittsburgh. *Resignations*—Charles T. Francis, Pittsburgh; A. Allen Goldbloom, New York City; Ruth I. Morrisson-Hansen, Lakewood, Ohio; Samuel E. Nowry, Dover, Del. *Removal*—Joseph H. Carroll from Pittsburgh to Cleveland Maternity Hospital, Cleveland; Joseph J. Ferner from Johnstown to State Reformatory, Huntingdon, Pa. *Death*—Harry L. Shaffer, Pittsburgh (Hahnemann Med. Coll. '14) recently, aged 41.

Beaver: *New Member*—Loyal P. Atwell, Ambridge.

Berks: *New Members*—H. P. Shellabear, 351 N. Fifth St., Reading; George R. Hetrich, 128 N. Mill St., Birdsboro.

Bradford: *Removal*—Charles S. Means from Towanda to Nobleton, Fla.

Butler: *New Member*—Amil M. Duster, 228 Ziegler Ave., Butler. *Removal*—James E. Quigley from Butler to Portersville.

Clearfield: *New Member*—John W. Froggatt, 108 N. Second St., Clearfield.

Clinton: *Death*—Orrin H. Rosser, Renovo (Medico-Chi. Coll., Phila., '90) Jan. 1, aged 61.

Delaware: *New Members*—William R. Levis, 8th and Chestnut St., Upland; Harold A. Taggart, 3723 Bonsall Ave., Drexel Hill. *Transfer*—Harvey F. Scholl, Moore, from Montgomery County Society.

Erie: *New Member*—Louis H. Gale, 114 W. 5th St., Erie. *Death*—John W. Wright, Erie (Jeff. Med. Coll., '90) Dec. 14, aged 59.

Fayette: *Death*—R. Abbott Smith, Uniontown, Dec. 31.

Lackawanna: *New Members*—Charles E. Thomson, Jr., Wyoming Ave., Scranton; John W. Houser, Taylor.

Lehigh: *Deaths*—Charles O. Henry, Allentown (Medico-Chi. Coll., Phila., '99) Jan. 30, aged 51; Ethan Allen Gearhart, Allentown (Coll. Phys. & Surg., Balt., '84) Feb. 8, aged 69.

Luzerne: *New Members*—John T. Kielty, 386 Wyoming Ave., Kingston; A. J. Valibus, Main St., Edwardsville. *Removal*—Agha B. Musa from Wilkes-Barre to State Hospital, Norristown (Montg. Co.). *Deaths*—John J. Gildea, Wilkes-Barre (Medico-Chi. Coll., Phila., '12) Dec. 8, aged 38; Harry S. Seiwell, Retreat (Univ. of Ill., '13) Dec. 30, aged 42.

Lycoming: *Removal*—Clayton B. Mather from Williamsport to Midway (Wash. Co.).

Monroe: *Transfer*—Philip G. Kitchen, Pocono Lake, from Philadelphia County Society.

Philadelphia: *New Members*—Isabel M. Balph, 2049 Chestnut St., Harold G. Barrett, 6464 Germantown Ave., Ellen P. Corson-White, 1923 Spruce St., William P. Creekmur, 901 S. 49th St., David A. Cooper, 262 S. 21st St., George S. Chaires, 6606 Ross St., Gtn., Benjamin H. Chandlee, 4321 Frankford Ave., Alexander P. Deak, 1811 S. 22d St., Robert L. Dickson, 4127 "O" St., Fred J. Fox, 5211 Castor Road, Joseph M. Gagliardi, 1523 S. Broad St., Martin H. Gold, 3301 N. 17th St., Joseph D. Goldfine, 1701 S. 55th St., Helen M. Hayes, 6204 Limekiln Pike, Walter F. Harriman, 1805 Spruce St., John C. Howell, 2029 Pine St., Nathaniel Hurwitz, 1705 N. 18th St., John Cooke Hirst, 2d, 1918 Pine St., Herbert T. Kelly, 1900 Spruce St., Frank E. Leivy, 1204 Spruce St., Joseph M. Looney, Jefferson Medical College, James C. McConaughey, 1000 Chestnut St., Messiah Mesropian, 6206 Haverford Ave., George R. Neff, 140 E. Gorgas Lane, Valentine F. Pytko, 4650 Tacony St., John D. Reese, 135 S. 18th St., James E. Roberts, 241 N. 18th St., Harry Rubin, 450 S. 57th St., Emil M. Senger, 259 S. 17th St., Rich-

ard P. Shapiro, 6021 Webster St., Emanuel M. Sickel, 3728 Walnut St., Michael Walkenberg, 1314 S. 5th St., Samuel A. Wilkinson, Jr., 1108 S. 46th St., Philadelphia. *Reinstated Member*—Thomas A. O'Hara, 227 So. 20th St., Philadelphia. (Nedjelko Antunovic, 3067 E. 92d St., Chicago, previously reported as having joined the Chicago Medical Society, is still a member of Philadelphia County Medical Society.)

SCHUYLKILL: *New Members*—William J. Cress, Pottsville; John L. Bond, Tamaqua.

SOMERSET: *Death*—Bart J. Smith, Windber (Maryland Med. Coll., '02) Jan. 2, aged 47.

WASHINGTON: *New Members*—James M. Boice, Tope Bldg., Burgettstown; Louis A. Carlet, 107 S. Main St., Washington. *Reinstated Member*—Harry Stunkard, Avella.

WESTMORELAND: *New Members*—William W. Briant, Jr., Box 22, Crabtree; Charles W. Dixon, Export; Samuel G. Henderson, 165 Grant Ave., Vandergrift. *Removal*—Daniel M. Easter from So. Brownsville to 207 N. Maple St., Greensburg.

PAYMENT OF PER-CAPITA ASSESSMENT

The following payment of per-capita assessment has been received since January 20th. Figures in the first column indicate county society numbers; second column, State Society numbers.

1927				
Jan. 20	Potter	1-3	963-965	$15.00
	Venango	4	966	5.00
	Monroe	1-11	967-977	55.00
	Franklin	23-36	978-991	70.00
	Mifflin	14	992	5.00
	Wyoming	9	993	5.00
	Cumberland	17-19	994-996	15.00
	Perry	1-6	997-1002	30.00
	Somerset	11-14	1003-1006	20.00
	Huntingdon	6	1007	5.00
	Northumberland	7-20	1008-1021	70.00
	Mercer	32-36	1022-1026	25.00
21	Delaware	5-69	1027-1091	325.00
	Mercer	37	1092	5.00
	Wyoming	10	1093	5.00
	Clearfield	1-20	1094-1113	100.00
24	Northampton	14-29	1114-1129	80.00
	Huntingdon	7	1130	5.00
	Delaware	70-72	1131-1133	15.00
	Schuylkill	61-80	1134-1153	100.00
	Fayette	1-16	1154-1169	80.00
	Montour	16-20	1170-1174	25.00
	Mercer	38	1175	5.00
	Dauphin	80-87	1176-1183	40.00
27	Susquehanna	2-15	1184-1197	70.00
	Montour	21-22	1198-1199	10.00
	Mercer	42-43	1200-1201	10.00
	Monroe	12-15	1202-1205	20.00
	Potter	4-8	1206-1210	25.00
	Franklin	37-40	1211-1214	20.00
	Somerset	15, 17-27	1215-1226	60.00
	Center	1-8	1227-1234	40.00
	Mercer	39-41	1235-1237	15.00
	Union	13	1238	5.00
	Philadelphia	1-24	1239-1262	120.00
	Allegheny	78-250	1263-1435	865.00
28	Delaware	73-77	1436-1440	25.00
	York	67-86	1441-1460	100.00
Feb. 1	Mercer	44-45	1461-1462	10.00
	Schuylkill	81-100	1463-1482	100.00
	Luzerne	32-53	1483-1504	110.00
	Wayne	1-15	1505-1519	75.00
	Center	9-10	1520-1521	10.00
	Dauphin	88-94	1522-1528	35.00
	Mercer	46-47	1529-1530	10.00
	Northumberland	21-29	1531-1539	45.00
	Philadelphia	25-1050	1540-2565	5,130.00
3	Cumberland	20	2566	5.00
	Cambria	38-67	2567-2596	150.00
	Huntingdon	8-21	2597-2610	70.00
Feb. 3	Northumberland	30-35	2611-2616	$30.00
4	Center	11-14	2617-2620	20.00
	Montour	23-25	2621-2623	15.00
	Mercer	48	2624	5.00
	Bucks	32-41	2625-2634	50.00
	Mifflin	15-17	2635-2637	15.00
7	Lancaster	8-52	2638-2682	225.00
	Adams	13-21	2683-2691	45.00
	Clinton	10-12	2692-2694	15.00
	Somerset	28-29	2695-2696	10.00
	Potter	9	2697	5.00
	Cambria	68-82	2698-2712	75.00
	Dauphin	95-114	2713-2732	100.00
	Mercer	49	2733	5.00
8	Center	15-16	2734-2735	10.00
	Cumberland	21-22	2736-2737	10.00
	Mercer	50	2738	5.00
	Lackawanna	1-19	2739-2757	95.00
10	Westmoreland	1-51	2758-2808	255.00
	Allegheny	251-350	2809-2908	500.00
	Lawrence	3-33	2909-2939	155.00
	Center	17-21	2940-2944	25.00
	York	87-96	2945-2954	50.00
	Carbon	1-16	2955-2970	80.00
	Delaware	78-79	2971-2972	10.00
	Mercer	51	2973	5.00
	Bradford	9-12	2974-2977	20.00
	Erie	19-50	2978-3009	160.00
	Huntingdon	22-23	3010-3011	10.00
14	Washington	21-80	3012-3071	300.00
	Berks	72-103	3072-3103	160.00
	Lycoming	71-83	3104-3116	65.00
	Elk	21	3117	5.00
	Luzerne	54-100	3118-3164	225.00
	Beaver	1-30	3165-3194	150.00
	Mercer	52-54	3195-3197	15.00
	Center	22	3198	5.00
	Lycoming	51-70	3199-3218	100.00
	Venango	5-8	3219-3222	20.00
	Mifflin	18-19	3223-3224	10.00
15	Bedford	1-8	3225-3232	40.00
	Lebanon	1-17	3233-3249	85.00
	Clearfield	21-35	3250-3264	75.00
	Mercer	55-56	3265-3266	10.00
	Cambria	83-101	3267-3285	95.00
	Butler	1	3286	5.00

COMMISSION ON COMPENSATION LAWS

LEVER F. STEWART, *Chairman*
Clearfield, Pa.

THE PROPOSED AMENDMENTS TO OUR COMPENSATION LAW

The Commission on Compensation feels that at this time county societies would welcome a brief résumé of the situation as it now stands. Therefore, the following is submitted. As a few of the Societies have voiced their disapproval of certain features in the proposed new law, an attempt will be made to show that the draft of the law recently sent out represents, not the ideal, but all the changes for which it has been feasible to ask.

Objections to the Present Law

The Mackey decision has not been agreeable to the medical profession. The reasons for this are too well known to bear repetition.

The thirty-day limit has always been deemed unfair to the injured man and the physician, and it suffers by comparison with the compensation laws of states adjoining Pennsylvania.

Provision for rehabilitation of the injured man is wanting. It is not sound economics to deprive the injured man of what, in many cases, is the most beneficial phase of his treatment.

The physician has no standing at law, nor has the hospital. This defect makes it difficult or impossible for either to receive justice in event of litigation brought to protect either interest.

Proposed Changes and Additions to the Law

The Mackey decision will be repealed. Point No. 3 covers this fully.

The thirty-day limit can be extended in suitable cases, as judged by the proposed medical boards or other established authority. Provision will be made to cover further payment for hospital and medical care.

As the physician has been notoriously careless in the matter of filing accurate reports on compensation cases, and especially in failing to do this promptly, the new law carries a penalty for failure to do these things. This is only a matter of good business, and will receive the support of the insurance carriers.

Insurance carriers are to choose their own physicians and surgeons.

Universities of rehabilitation and reëducation are to be asked for. It is doubtful if such a request will be granted at this time, but we desire to go on record as recommending such a valuable addition to the treatment of the injured man.

In event of dispute as to whether death occurs from accidental or natural causes, autopsies are to decide the issue. This is a very important matter, and obviously, accurate decisions can be made only in this way.

It is hoped that the Compensation Board will include a physician as a member. This will be a great help, and should have been provided for originally, as so much of the work of the Board deals with medical problems.

There are several other minor proposed changes, but for the sake of brevity they are not discussed at this time, especially as they are not likely to be objected to by the profession.

Objections of Several County Societies and a few Reasons why they cannot be Complied With

Many physicians feel that if the law is changed we should ask for one that is ideal in every respect, including a provision for paying the physician a fee that he feels is fully commensurate with his services. The Commission has a deep sense of its obligation to the profession, and would prefer to put through the ideal law. However, our researches have led us to recognize limitations in our demands.

Another point that has been objected to is the matter of permitting insurance carriers to choose their own physicians. The carriers will oppose any other interpretation of this point. To leave it out would only defeat us as we cannot ignore the interests of the insurance carriers. Furthermore, the present law already extends this privilege to the employer, and while it may work a hardship in some cases, in the end it is too fair a provision for us to try to change.

The Commission sees no equity in the protest of certain societies against the provision for making accurate and prompt reports to insurance companies by the physician. The ultimate result in this case is that the physician is paid much sooner than where the usual delay occurs. In addition, it greatly expedites the work of the carriers, and is a just and fair provision.

Your Commission stands ready to receive and act upon all constructive suggestions or criticisms. We are hopefully anticipating the success of our efforts this year. We strongly approve of the selection of Mr. Harry Mackey by the Board of Trustees.

We again appeal to you to give this matter early attention and especially to lose no time in your appeal to your legislators.

COMMITTEE ON SCIENTIFIC WORK

Thomas G. Simonton, *Chairman*
Pittsburgh, Pa.

PLANS FOR THE ANNUAL SESSION OF 1927

The Committee on Scientific Work met at Harrisburg on February 1, 1927, with every member present. The program for the Pittsburgh Session, October 3 to 6, 1927, was outlined, and the arrangements completed, except for a few minor details. On adjourning, the members expressed themselves most enthusiastically on the contemplated program and the satisfactory arrangements for exhibits and section meeting places.

Dr. Robert L. Anderson, chairman of the Committee on Arrangements, reported that definite reservations had been made as follows: Bureau of Registration, Technical Exhibits, Scientific Exhibits, House of Delegates, Board of Trustees, Committees, and Sections on Eye, Ear, Nose and Throat Diseases, Pediatrics, Dermatology, and Urology will be accommodated in the Hotel Schenley. General Meetings, the Sections on Medicine and Surgery, and the President's Reception on Wednesday evening will be held in the University Club, just across the street from the Hotel Schenley. Two large adjoining lots will provide free parking space, day and night, for the members and their friends.

The University Club will serve club breakfasts, lunches, and dinners at reasonable prices from October 3d to 6th, to all members of the Society and their friends—including the ladies—who wear the badge of the Medical Society of the State of Pennsylvania, and have registered at the Registration Bureau. You are asked to make the University Club your home while attending the Pittsburgh session. The entire privileges of the Club are extended to all members of the Society, ladies, and their friends for the four days. Cash payments will be requested of all who are not members of the Club.

The President's Reception will be held Wednesday evening in the University Club main dining and ball room.

The Public Meeting will be arranged for Wednesday evening at 8 p.m., and, if the present plans can be carried out, will be a hummer.

The Smoker to be given by the Allegheny County Medical Society will be held Tuesday evening in the Ball Room of the William Penn Hotel, down town. This is the only function to be given outside the Oakland district.

The Schenley Hotel will provide accommodations for a hundred guests, limited to members and their wives, while the new hotel, Webster Hall, three squares distant from the Schenley Hotel will take care of the men. The latter is a hotel for men only.

A new departure this year will be the section demonstrations in the Scientific Exhibit. Each section has pledged itself to be responsible for such a practical demonstration as may be of interest to its members. For example, the Surgical Section will show the proper kind of splint for certain fractures, and the position and correct application of the bandages. These demonstrations will be by men whom the section officers select, and a time will be assigned when they will be given.

The Committee on Scientific Work feels that this is a decided step forward, and if the members of the Society take a deep interest in the section demonstrations this year, they may prove in the years to come to be of great value.

Dr. Jabez N. Jackson, president of the American Medical Association, will address the Society Tuesday morning, take part in the scientific program of the Surgical Section in the afternoon, and speak at the banquet of the Conference of Secretaries in the evening.

The skeleton program of all the sections has been drawn up, and is nearing completion. The sections, from now until the time of the meeting, will outline each month in the Journal, their aims and intentions for the Pittsburgh session.

At this time the Committee on Scientific Work feels justified in predicting that, from a scientific and postgraduate point of view, the program will equal or surpass anything yet attempted.

CALL FOR VOLUNTEER CASE REPORTS AND PAPERS

FOR THE

PITTSBURGH SESSION OF THE MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA

OCTOBER 3 TO 6, 1927

GENERAL MEETING—8 Case Reports of 5 minutes.

SECTION ON MEDICINE—8 Case Reports of 5 minutes.

SECTION ON SURGERY—8 Case Reports of 5 minutes.

SECTION ON PEDIATRICS—8 Case Reports of 5 minutes.

SECTION ON EYE, EAR, NOSE AND THROAT—5 Case Reports of 10 minutes.

SECTION ON UROLOGY—8 Case Reports of 5 minutes.

For publication in the ATLANTIC MEDICAL JOURNAL, the 5-minute case reports will be limited to 1,000 words, and the 10-minute case reports to 1,500 words.

In the General Meeting and Sections on Medicine, Surgery, and Pediatrics, 15 minutes will be allowed for general discussion of these case reports, and 5 minutes for discussion in the Eye, Ear, Nose, and Throat Section.

Volunteer papers, with the titles and abstracts, will be considered by the Committee on Scientific Work on or before May 1, 1927, but the Committee reserves the right to reject a paper if it is not deemed of sufficient merit, or should it not fit in with the skeleton program tentatively planned at its February meeting.

Authors of papers and case reports should send in their titles and abstracts at once to the secretary of the section in which they want to appear, or to the Chairman of the Committee on Scientific Work.

GENERAL MEETINGS: Dr. Thomas G. Simonton, 121 University Place, Pittsburgh, Pa.

SECTION ON MEDICINE: Dr. Jesse L. Lenker, 232 State St., Harrisburg, Pa.

SECTION ON SURGERY: Dr. Harvey F. Smith, 130 State St., Harrisburg, Pa.

SECTION ON EYE, EAR, NOSE AND THROAT: Dr. Curtis C. Eves, 247 S. 17th St., Philadelphia, Pa.

SECTION ON PEDIATRICS: Dr. Zaccheus R. Scott, Westinghouse Bldg., Pittsburgh, Pa.

SECTION ON DERMATOLOGY: Dr. Lester Hollander, Jenkins Bldg., Pittsburgh, Pa.

SECTION ON UROLOGY: Dr. B. A. Thomas, 1900 Spruce St., Philadelphia, Pa.

HOTEL COMMITTEE

I. H. ALEXANDER, M.D., *Chairman*
725 Jenkins Building
Pittsburgh, Pa.

HOTEL RESERVATIONS

FOR THE PITTSBURGH MEETING, OCTOBER 3D TO 6TH, 1927

Members planning to attend the meeting of the Medical Society of the State of Pennsylvania at Pittsburgh are requested to make *hotel reservations* as early as possible.

The Hotel Schenley, Bigelow Blvd. and Forbes St., will be the headquarters for the Society, and the scientific meetings will be held either in or near this hotel.

The Hotel Schenley has reserved 50 double

rooms at the following rates (no single rooms available):

Double rooms with tub bath, $8.00 and $10.00 per day.
Double rooms with shower bath, $7.00 per day.

Webster Hall (men only) Fifth Ave. and Dithridge St., is one square from headquarters. It is in the heart of the beautiful Schenley Park district, surrounded by the University of Pittsburgh, Carnegie Tech, Forbes Field, Pittsburgh Athletic Club, Memorial Hall, Syria Mosque, Cathedral of Learning, Carnegie Library and Museum. It is away from the noise and confusion of commercial life. It is only a few minutes from downtown or East Liberty, and has all the features of a club, including hotel service. The following are the rates:

Single room with hot and cold running water .....$2.50 and $3.00
Double room with hot and cold running water .....$2.00 per man
Single room with bath $4.00
Double room with bath .....$3.00 per man

For the rooms without bath, there are ample showers on every floor. This being a club hotel and one for men only, the rooms without bath are very desirable. Another fact that makes the rooms without bath very desirable is that the guests have access to the swimming pool.

Members desiring to stay at either the Schenley Hotel or Webster Hall are requested to make their reservations through Dr. I. H. Alexander, 725 Jenkins Building, Pittsburgh, Pa. (Phone Grant 5284), Chairman of the Hotel Committee.

The William Penn and the Fort Pitt Hotels, both located in the retail business and theater section, will accommodate all members who wish a downtown hotel. Reservations at either of these hotels should be made direct with the hotel management.

The following are the rates of the William Penn Hotel, William Penn Way and Sixth Avenue:

Courtside Rooms
Single room with shower bath.$4.00 and $5.00 per day
With tub bath .....$5.00 and $5.50 per day
Double room with double bed, shower bath .....$6.50 per day
With tub bath.....$7.50 per day
With twin beds and tub bath .....$7.50 per day
Outside Rooms
Single room with tub bath .....$6.00, $7.00, $8.00 and $9.00 per day
Double room with double bed, tub bath .....$8.00, $9.00, $10.00 and $11.00 per day
With twin beds and tub bath .....$9.00, $10.00 and $12.00 per day
Suites .....$12.00 and $18.00 per day

The following are the rates of the Fort Pitt Hotel, Tenth Street and Penn Avenue:

Single Rooms (1 Person)
Without bath .....$2.50 and $3.00 per day
With bath .....$3.50, $4.00 and $5.00 per day
Double Rooms (2 Persons)
Without bath .....$4.00 per day
With bath .....$5.00, $6.00 and $8.00 per day
Twin beds and bath .....$7.00, $8.00, $9.00 and $10.00 per day

THE POTENCY DATE ON BIOLOGICS

DR. JOHN F. ANDERSON

Frequent inquiries are received at the Squibb Laboratories from pharmacists and physicians asking whether biologics on which the potency date has passed might not still be used with safety and confidence. This article is written with the idea of answering this same question as it arises in the minds of other representatives of the professions.

The potency date on biologics is defined in the law as that "date beyond which the contents (of the packages) cannot be expected beyond reasonable doubt to yield their specific results." The Federal regulations governing the fixing of the potency date on biologic products have two main provisions. One pertains to those products that have a standard of potency which can be used at any time to establish definitely the potency and the therapeutic worth of the product. The other relates to those products for which there is no standard of potency, or no means of determining quickly by laboratory methods the true therapeutic worth of the product.

In the first class we have the antitoxins, such as diphtheria and tetanus, for which there are international standards of potency. For these products, the Government regulations prescribe that for each twelve-months' potency period there shall be added to the contents of the package a definite excess number of units to compensate for the loss in potency on aging, even though not kept under proper conditions. For example, a package of 10,000 units of diphtheria antitoxin, having a potency period of two years, must contain, when finished, at least a 30-per-cent excess in the number of units, or a total of 13,000 units instead of only 10,000 units as stated on the label.

It is at once apparent, therefore, that a package of diphtheria antitoxin may be used any time within the potency period stamped thereon, and that the person to whom it is administered will get at least the number of units stated on the label. Should the contents of the package be used after the potency date has expired, it will still be found to be therapeutically effective, and at any time within a year thereafter probably will contain within 10 per cent of the original labeled potency. All will recall that in the diphtheria epidemic at Nome, Alaska, the only diphtheria antitoxin that was at first available was outdated, but that its use saved many lives.

There are potency standards for other products than diphtheria and tetanus antitoxins, among which may be mentioned typhoid vaccine, diphtheria toxin for the Schick test, anti-meningococcic serum, anti-pneumococcic serum, anti-dysenteric serum, scarlet-fever toxin and scarlet-fever antitoxin. However, the standards for all of these products, with the exception of the last, are used only for the purpose of insuring that when distributed the product will exert certain specific effects, as for example, that the ani-pneumococcic serum will protect mice against a certain dose of a culture of pneumococci, using a standard serum for comparison; or that scarlet-fever toxin for the Dick test will cause a positive skin test in a person not immune to scarlet fever.

Usually but little excess volume is put into the containers of these last-mentioned products, for the reason that the methods of standardization do not permit of exact quantitative measurement.

These products, therefore, will show a gradual decrease in potency on aging, but this decrease will be much less when the products are kept properly refrigerated. Most of them may be used after the potency date has expired, if due allowance is made in the dosage for the decrease that occurs from aging. No exact information is available, however, as to how much this loss of potency is for each product.

Consequently, for those products for which no standards of potency have been established, the Government has fixed a definite potency period. These products, which include the various bacterial vaccines, except typhoid, anti-streptococcic serum, leukocyte extract, normal horse serum, and similar preparations, probably still are therapeutically active after the potency date has been reached, if they are used in excess of the original dosage.

There is no potency standard for smallpox vaccine, except that it must produce a good "take." Refrigeration is of the greatest importance to maintain the potency of this product. If kept at temperatures above 50° F., the vaccine rapidly loses in potency. Smallpox vaccine should be kept, whenever possible, in a tin box in direct contact with the ice.

Rabies vaccine, Semple modification, being a killed virus, is in the same class as other products for which there is no potency standard. Rabies vaccine, Pasteur, however, has a short potency period and, except for the first seven doses, is shipped from the laboratory for immediate use only.

It will be apparent from this summary of the use of the potency date on biologics that the Government regulations have fixed the potency date for various products to insure "beyond reasonable doubt" the therapeutic worth of those products any time prior to that date. It is also clear that the antitoxins and most of the other biologic products may be used after that time in cases of emergency, if proper allowance is made by increasing the dosage.

All will realize the importance of constant attention to stocks of biologics, always making sure that those with the shortest potency periods are used first.

TISSUE DIAGNOSIS IN THE OPERATING ROOM*

And Immediate Cover-slip Examinations of all Fluids and Pus

JOSEPH COLT BLOODGOOD, M.D.
BALTIMORE, MD.

Microscopic examination of stained frozen sections has been possible for more than a quarter of a century. The staining of unfixed frozen sections with polychrome methylene blue and other stains is a well-established procedure. In many operating rooms in universities and other large and small surgical clinics, provisions for these immediate diagnostic studies have not only been available, but have been in practical use for years. While, unfortunately, on the other side, this diagnostic part of the operating room is conspicuous by its absence in many clinics.

Before 1915 it was rarely necessary for a surgeon well trained in gross pathology to need a frozen section to help him in diagnosis at the operating table. Since 1915, and especially since 1922, the public has become so enlightened that malignant disease formerly easily recognized either clinically or in the gross, now appears in our operating rooms devoid of its easily recognized clinical and gross appearance and can be properly discovered only by an immediate frozen section. The majority of operating rooms are not equipped or prepared for this new diagnostic test.

The first essential part for this diagnosis is the technician—one to cut and stain the frozen section, or to make and stain the smear. The second is a pathologist trained to interpret it. It is possible for the surgeon to be all three in himself, and some young surgeons are so equipped. In others it is a dual combination—surgeon and pathologist in one, and the technician. More frequently it is three—operator, technician, and pathologist. It makes little difference whether it is one, two, or three individuals, providing each has the equipment and training for this most difficult diagnostic test.

In the address as chairman of the surgical section of the Southern Medical Association, I discussed biopsy, and this paper has been published in the *Southern Medical Journal* for January, 1927 (Vol. XX, page 18). A reprint of this paper will be sent to any one on request. The chief object of this letter is to come in contact with surgeons and pathologists who are sufficiently interested in this problem to discuss it either by correspondence, or by attending a meeting in the surgical pathological laboratory of the Johns Hopkins Hospital, either the Monday before, or the Friday after the meeting of the American Medical Association in Washington.

Schools for technicians may have to be established in different sections of the country, and the surgical pathological laboratories of the medical schools and the larger surgical clinics should offer courses in this tissue diagnosis, so that surgeons may learn to become their own pathologists, or pathologists learn the particular needs of the surgeon in tissue diagnosis in the operating room.

It is quite true that when the majority of the public are fully enlightened, the surgeon will see lesions of the skin and oral cavity and the majority of subcutaneous tumors when they are so small that their complete excision is not only indicated, but possible without any mutilation. The chief danger here will be a surgical mistake—the incomplete removal of an apparently innocent tumor. There is no necessity here for biopsy. If a proper local excision is done, no matter what the microscope reveals, that local operation should be sufficient. But when lesions of the skin, oral cavity, and soft parts are extensive and their complete radical removal mutilating, then there must be biopsy to establish the exact pathology.

In tumors of the breast and disease of bone, for years, the diagnosis could be made clinically, or from the gross appearances at exploration. But now, in an increasing number of cases, the breast tumor must be explored, and the gross pathology of this earlier stage is not sufficiently differentiated to allow a positive diagnosis. Immediate frozen sections are essential to indicate when the complete operation should be done. The same is true of the earlier stages of lesions of bone. The x-rays no longer make a positive differentiation between many of the benign and malignant diseases; for example, sclerosing osteomyelitis and sclerosing osteosarcoma.

We must not only specialize in tissue diagnosis, but we must organize this department so it will function properly in as many operating rooms as possible in this country.

Then there is a final and most difficult question to consider. I doubt if it can be settled. What shall be

* From the Surgical Pathological Laboratory, Johns Hopkins Hospital.

done in those operating rooms in which there is no technician to make the sections and no one trained to interpret the microscopic picture? How can a piece be excised or a tumor removed, for example, from the breast, and this tissue sent to some laboratory for diagnosis without incurring the risk of the delay to the patient? I have discussed this point in my paper on biopsy.

County Society Reports

BERKS—FEBRUARY

Dr. Alexander Randall, of Philadelphia, addressed the Society on "Tuberculosis of the Kidney." In the cure of renal tuberculosis, medicine and surgery each have claimed the greater number of cures, though lately surgery seems to be the procedure of choice. In 1901 Alberand challenged any one to produce a patient cured by medicine.

Of 316 patients placed on medical treatment, 70 per cent died in two years, 98 having survived. Of these 98, 33 per cent were relieved of symptoms, while 67 per cent were still suffering from tuberculosis. Of 78 per cent treated surgically, 31 per cent died, 59 per cent were cured, and 10 per cent still had tuberculosis. In 1925 the *British Medical Journal* reported a list of cases treated by surgery, of which 20 per cent died, 60 per cent were cured, and 20 per cent still had the disease. Surgery appears today to be the best treatment.

Two things are quite noticeable—our lax diagnosis, and our lack of knowledge of renal tuberculosis. This disease is usually secondary to tuberculosis in other organs. In one out of every ten cases of pulmonary tuberculosis there is a renal infection. The kidney condition is usually unilateral, and remains so for about 3 years. At death, 55 per cent are unilateral.

There are several forms of renal tuberculosis. One is the chronic closed parenchymatous nephritis, which goes either to caseation or liquefaction. This is a hematogenous infection, and presents no urinary findings. Another is a mixed infection, both parenchymatous and pelvic, having various degrees of infection and resistance.

The symptoms may all be vesical—pyuria, pain, and hematuria. Loss of weight is one of the general bodily symptoms; also chills or evening rise of temperature, tumor, or dull constant boring pain over the kidney. There may be paroxysmal colic across the ureter and groin, sometimes in the genitalia; also a periodic appearance of blood in the urine. Palpation may reveal a pipestem ureter. Tuberculin may be employed as a diagnostic aid; also the cystoscope and pyelogram should be used.

The patient can have three quarters of the kidney substance removed, and still maintain nitrogenous equilibrium.

Acute cystitis is not usually a spontaneous disease. The majority of cases remain unilateral for about three years. Spontaneous cure results after caseation and liquefaction in 43 per cent. The bacteria of tuberculosis nearly always pass through the kidney. If the disease is bilateral, then remove the worse-diseased kidney.

Drs. Henry, Funk, and Grim took part in the discussion.

Clara Shetter-Keiser, M.D., *Reporter.*

CAMBRIA—JANUARY-FEBRUARY

The regular meeting was held January 13, 1927, in the Y. M. C. A. building, Johnstown. The following officers were elected for 1927: President, Edward Pardoe; first vice-president, Arthur Miltenberger; second vice-president, Harold M. Griffith; secretary and treasurer, Joseph J. Meyer; censor for three years, Arthur H. Miltenberger; trustee for three years, Robert C. Davis; reporter, W. B. Templin. Following the election Dr. L. W. Hornick, retiring president, addressed the Society. He said in part:

The important events of the economic group of our year's activities were the advertising campaign, revision of the fee bill, and the publication of a credit guide. The latter should be used regularly, and should justify the tremendous amount of work required for its compilation. The value of the fee bill was amply shown by the decision obtained against certain compensation-insurance carriers. It should be a matter of honor for each member of this Society to adhere strictly to this bill.

The need for organized medicine is obvious to us all. The unit of greatest importance in our scheme of organization is the County Society. In order that this Society remain one of the best units in the State we must have progress. This demands that each of us give some time, thought, and coöperation to our Society.

Dr. Wendell Phillips, President of the American Medical Association, has emphasized the need of the study of preventive medicine and hygiene. The day of preventive medicine has come, and the medical profession must meet the new demands in a manner to prevent the development of state medicine. The doctor should be the master of the health situation in his community and openly teach the gospel of good health and preventive medicine.

The outstanding need of the hour is public-health education. The economic value of publicity is recognized by all the cultists, who use every avenue of approach to the public. We should turn their chief weapon against themselves. Teach the truth to the people, and the majority will not long tolerate the cults. I firmly believe the time is ripe for the Society to embark on an educational program. This program should be such that it will make the Cambria County Medical Society a civic body of importance in the community.

The following recommendations were made:

1. Social: (a) Continuation of the annual picnic and banquet with a full attendance. (b) Creation of a committee to visit and, if necessary, to aid sick members.

2. Economic: (a) Strict adherence to the official fee bill. (b) Regular use of the credit guide, and, to increase its value, prompt collection of accounts.

3. Scientific: (a) The intercounty clinic, or the banquet, should be held earlier in the year to avoid having the picnic, clinic, and banquet follow each other in successive months. Such an arrangement will permit a business and scientific program with reports of delegates on the State Society transactions to be presented at the October meeting. (b) Meetings should start at 8:30 p. m., or better at 8 p. m., to allow time for discussion of papers before out-of-town speakers and guests must leave.

4. Educational: Should the Society see fit to adopt a program of public health instruction, which I earnestly urge, the following outline is suggested. This is based on the programs of such county units as the Allegheny and Philadelphia County Societies, and Gorgas Memorial Institute: (a) The active work is to be entrusted to the Public Relations Committee which would become our most important committee. The personnel would have to be chosen with the utmost

care. (b) The work of education is to be carried on through: (1) The public-press health article. (2) Local radio health talks. (3) Letters to county, city, and school authorities, and all civic clubs, apprising them of our plan for medical relief in disaster, and offering and asking coöperation in projects for civic improvements. (4) Lectures—a list of titles of short lectures on health and medical topics to be sent to all civic and fraternal bodies with an offer of competent speakers. All such lectures must be approved by the committee. (5) Coöperation of the Woman's Auxiliary, through clubs and parent-teacher associations, in creating a demand for lectures and popularizing the magazine *Hygeia.*

5. General: (a) The vice-presidents should be made active officers by appointment as chairman of committees and by invitation to sit in at meetings of the executive committee. (b) The most important recommendation, and one urged by the State Society, is that we shall have a president and a president-elect. The president-elect shall be required to attend all meetings of the executive committee until he assumes the office actively, which may be in four or six months or a year, at the discretion of the Society. (c) Revision of the constitution and by-laws to conform with revisions of the Constitution and By-Laws of the State Society, and to legalize the adoption of the president-elect plan.

The February meeting was held at the Y. M. C. A. building, Johnstown, on the 10th. Dr. W. P. Brown, Medical Secretary of the Pennsylvania Tuberculosis Society, addressed the Society on "The Treatment and Public-Health Aspects of Tuberculosis." Following this address there was a discussion of Article No. 10 of the Compensation Bill. It was unanimously voted that this article as it now stands is unsatisfactory.

W. B. TEMPLIN, M.D., *Reporter.*

ELK—JANUARY-FEBRUARY

The annual meeting was held at Ridgway, January 13th. We were honored by the presence of Dr. Arthur C. Morgan, of Philadelphia, President-Elect, and Dr. Walter S. Brenholtz, of Williamsport, Councilor for the district. After an informal dinner, the regular meeting opened. The secretary reported only two cancelled meetings during the year, and an average attendance of 41 per cent. The treasurer's report showed that we are solvent. The following officers were elected for 1927: President, Perry O. Hall, Ridgway; vice-president, J. B. Fulmer, Emporium; secretary, Samuel G. Logan, Ridgway; treasurer, M. M. Rankin, Ridgway; censors, H. H. Smith, Johnsonburg (term expires 1929); Walter M. Black, St. Marys (term expires 1928); S. T. McCabe, Johnsonburg (term expires 1927); district censor, J. C. McAllister, Ridgway.

The February meeting was held on the 10th. The Committee on Public Policy and Legislation discussed the proposed changes in the Workmen's Compensation Act, as reported by the Compensation Commission of the State Society. Generally speaking, these proposed changes did not meet with our approval. The ideas were too vague in many instances. The section giving the insurance carriers the right to select the physician was most emphatically condemned. It is bad enough as it is with the employer having that right. If it were changed at all, we would give the injured employee the right (if conscious), as being more in line with American principles.

It is also inferred that physicians are the only ones lax in rendering bills, but as a matter of fact the carriers are careless and slow also. We could see no reason for outlawing an account after thirty days; seven years is good enough for us. One of the carriers admitted that if this part of the proposed changes went through, they would avoid paying 80 or 85 per cent of their bills. It was intimated by the Commission that we should not antagonize the carriers, and that we should ask for what we think we can get. This may be good politics, but we did not see it that way at all. We thought we should ask for what we should have—for what is fair and just and right, and then, if what we want happens to be contrary to the ideas of the carriers or organized labor, we are not averse to fighting for it.

The section calling for three medical boards to pass on claims in dispute may be all right, but the idea of having one physician represent capital, one organized labor, and the other the organized medical profession was not approved.

Dr. S. T. McCabe gave a résumé of the progress of medicine the past year.

SAMUEL G. LOGAN, M.D., *Reporter.*

ERIE—FEBRUARY

Dr. John A. Lichty, of Clifton Springs Sanitarium, New York, delivered an address on pernicious anemia, saying that in the twenty-six years of his practice he had had 144 cases of this disease, of which Barker of Baltimore said "No one knows what pernicious anemia is and no one knows a cure." In two cases of the series, autopsy disclosed carcinoma. The greatest number of cases occurred during the war, perhaps following influenza. Strain is a large factor, such as death in the family, or financial distress.

The shortest prodromal period observed was two months, the longest twenty years. Weakness of the knees and numbness of the finger tips are prodromal symptoms. Absence of knee jerks is to be expected, also pounding in the neck. The circulatory findings are suggestive of aortitis. Many patients do not have the lemon-yellow skin, some are not at all pale. Many come with a history of jaundice. Some have a remarkably good color, and it is well to observe the roof of the mouth. Diarrhea is the most frequent early symptom. Achylia gastrica is always present in pernicious anemia, in Dr. Lichty's opinion, and Osler said pyorrhea was common. A patient with a smooth, velvety tongue and diarrhea, with a spasmodically enlarged spleen, is very likely to have pernicious anemia. Bilious attacks are also quite characteristic. There may be as many as eight or ten remissions.

Laboratory study presented the following findings: achylia in 102 cases, color index 119, leukopenia 112, nucleated reds 38. The etiology was classified as follows: hereditary in 75 cases, gall-bladder disease in 15, influenza in 14, acute indigestion in 12, typhoid fever in 3, and lues in 2. The blood picture is not an absolute test. The history is much more important, although a diagnosis of pernicious anemia should not be made without a blood examination.

There are only two secretions with acid reaction—the normal gastric juice and the urine. When the acid of the stomach is high, the urine reaction is low, and vice versa. Physicians of Clifton Springs Sanitarium have plotted a curve by which they can tell from the urine whether there is acid in the stomach. During digestion, as the stomach reaches its point of highest acidity, the urine becomes less acid, or even alkaline. The test for achylia is much to be depended on. The high color index should be verified again and again. It is well to remember that a

patient with a leukopenia may have a cold and his white-cell count be temporarily up to normal. Nucleated red counts are often low or overlooked altogether because of not taking enough time.

Dr. Lichty brought out many points of differentiation, and said that the diagnosis of pernicious anemia is made by exclusion. In considering achylia, the tendency to low acid in carcinoma of the colon, sigmoid, and rectum, also in cases operated on for peptic ulcer, should be remembered. The x-ray is very important in these cases. The barium meal should be repeated, and he cited one case in which this test was repeated sixteen times. Hypertension is very unusual in these cases. The edema is not due to kidney involvement, but to the anemia itself. The leukopenia and weakness of early tuberculosis should not be forgotten.

Large doses of hydrochloric acid—as much as one ounce daily—are beneficial. If the patient has achylia, the taking of hydrochloric acid regularly acts as a barrier to pernicious anemia. There is no harm in taking it. One patient has taken it 30 years. It is the very exceptional patient who cannot take hydrochloric acid. It is best given in fruit juice of any kind preferred.

After transfusion, the intervals between crises are shorter. The patients are saved, so to speak, for the moment, but they die sooner or later. Changing the diet suddenly is better than washing out the colon. The high protein diet developed by Murphy and Minot, of Boston, seems to give excellent results. It is described as liver-feeding. Not less than a third-pound, more if possible, of cooked calf's, beef, or chicken liver or lamb's kidney is given daily. It is weighed after cooking, and cooked any way except with butter or grease. Dr. Lichty said he has never seen cases come back to the normal blood picture as they do with the liver feeding. Great credit is due to the Boston men who worked out this treatment. He also mentioned the benefit from high altitude in these cases, and closed with the wish that more was understood about the causes of achylia.

Anna M. Schrade, M.D., Reporter.

LEBANON—FEBRUARY

The regular meeting of February 8th was addressed by the president, Dr. W. Horace Means. He presented the history, treatment, and after-results of four cases of fractured femur. X-ray films taken at all stages of the treatment were shown, and the patients themselves exhibited. The basis of his remarks was that, no matter how serious the fracture, if there is not too much outside interference, nature will give good clinical results. One patient presented had a very badly comminuted fracture of the surgical neck of the femur. A good clinical result was obtained simply by keeping the leg on extension with the general line good. The point was made that if operative treatment had been employed, the result would not have been nearly so good. Emphasis was laid upon the fact that frequent x-ray pictures should be taken, so that the treatment may be followed intelligently.

John D. Boger, M.D., *Reporter.*

LUZERNE—JANUARY-FEBRUARY

The stated meeting of January 5th was held in the Society Building, with President G. R. Drake in the chair. Resolutions were read on the deaths of Drs. John J. Gildea and Eric Adams. Drs. John T. Keilty of Kingston and Albert J. Valibus of Edwardsville were elected to membership.

Dr. G. L. Howell, Trucksville: The Problems of the General Practitioner.—The general practitioner must be a sort of specialist in every line, or a Jack-of-all-trades. Many are traveling sixty to one hundred miles a day and seeing all sorts of patients, with an occasional emergency or obstetrical case to break the daily schedule. The fees of the general practitioner are not commensurate with the time and effort put into the daily work. The expense of maintaining his office and equipment is large. The long years of preparation are turning many boys away from medicine. The general practitioner is apt to be an inexperienced young man using his practice as a stepping-stone to a specialty. Hospitals are not so convenient to country practitioners as to those in the city. Nevertheless, the general practitioner is using the hospital more each day. To the man of moderate means, the worst feature in regard to the hospital is the system of charges. On account of these charges, he puts off his admission to the hospital until the case is well advanced, and hurries his departure by many days before it is safe for him to leave. For the good of the patient there is need of coöperation between the general practitioner and the specialist. Another unfortunate condition found by the general practitioner is the treatment of cases by druggists and nurses. Could not men be trained for country practice, as rural teaching is being taught in our normal schools?

Dr. F. D. Thomas, Coroner of Luzerne County: The Relations of the Coroner to the Medical Profession.—The physician is in a position to save the coroner a great amount of needless investigation, and very often unnecessary expense to the county. For instance, there have been no less than a dozen cases during my term of office that absolutely required postmortem examinations, where the physician did everything possible to prevent such examination or else refused to assist the coroner's office in any way. I should like to see our county medical society advocate the enactment of legislation which would require every case coming under the jurisdiction of the coroner's office to come to autopsy. It has been my policy to have postmortems performed by men especially qualified for such work. Most of our deaths occur in or about the mines. Due to the compensation law, extreme care must be exercised in order that absolute fairness will be shown both the coal company and the families of the victims. In a great many of these so-called mine accidents, death is due to what we term "natural causes." Today, deaths from "moonshine" occur so frequently that we consider it unnecessary to "post" them. The abortionist always seems a delicate question to bring up before medical men. The authorities at present have a number of names of physicians and midwives who have been performing illegal operations, but they are unable to prosecute because of lack of evidence. This is one instance where the coroner or district attorney should be notified before death, as a sworn deathbed statement must be secured from the patient.

The annual banquet meeting was held January 19th, at the Hotel Sterling, Dr. P. P. Mayock, retiring president, acting as toastmaster. Dr. Mayock reviewed the year's work in his address. Dr. Alexander Armstrong of White Haven spoke on "The Practice of Medicine as a Calling." He was followed by Dr. Manfred H. Kudlich, of Hazleton, on "Friendship," speaking under the guise of the subject "Our Firstborn," and bringing from Hazleton the official greetings of the Hazleton Branch. Dr. Joseph C. Doane, Superintendent of the Philadelphia General Hospital, and President-Elect of

the American Hospital Association, spoke on "The Relation Between the Physician and the Hospital."

A regular meeting of the Luzerne County Society was held in the Society building on February 2d, President G. R. Drake in the chair. Dr. Whitney read resolutions of condolence in memory of the late Dr. Harry P. Seiwell. Dr. Lewis G. Wettereau, of McAdoo, was elected to membership. The address of the evening was delivered by Dr. J. M. Wainwright, of Scranton, speaking on "Some Aspects of Breast Cancer."

Lewis T. Buckman, M.D., Reporter.

LYCOMING—FEBRUARY

The scientific program of the meeting held February 11th at City Hall, Williamsport, consisted of a symposium on the management of pneumonia.

Dr. Ernest T. Williams, Williamsport: The Management of Pneumonia in Children.—The speaker stressed the importance of cool but not cold air, condemned coal-tar products as antipyretics, and emphasized the stimulation of the heart of the patient from the beginning. The pulse rate should be carefully watched. He advised adrenalin and atropin, carefully judged as to dosage. Due care should be exercised in the use of narcotics. During convalescence, cod-liver oil and syrup of ferric iodid are useful. Mention was made of the intraperitoneal injection of mercurochrome as a possible improvement in treatment.

Dr. George R. Drick, Williamsport: The Management of Lobar Pneumonia in Adults.—If the patient is to be moved to the hospital, it should be done early, for fatalities may occur as early as the fifth day, due to the crisis, and often patients are taken from their homes to the hospital on that day. Venesection may be of benefit. Too large amounts of fluids at one time by mouth are to be condemned as a cause of acute dilatation of the stomach. A high carbohydrate diet is advisable. The stimulant of choice is digitalis, and it should be given in sufficient dosage for the individual case up to the time of crisis. Strychnin should be withheld until needed, and then given in large enough dosage to do good. Hypodermics of morphin for pain and restlessness are to be preferred. The use of Dover's powder and cough syrups is not advisable. Codein is valuable to control excessive cough. Mustard plasters externally may be used, but other applications are of little value. Alcohol is a food, not a stimulant. It should not be used during the crisis.

The speaker reported a case of lobar pneumonia in a diabetic admitted to the hospital with a blood-sugar content of .33 who made a good recovery. Another patient with lobar pneumonia, diabetes, and delirium tremens was treated with whiskey, hyoscin, and insulin. Dr. Drick said: "Learn your patient's habits, and don't try to reform a man when he is sick."

Dr. F. R. Adams, Watsontown: Serum Therapy in Pneumonia.—The method of administration is preferably intravenous, and the antibody solution should be given under conditions parallel with the use of diphtheria antitoxin. Antibody serum is about 75 per cent specific in treatment. The use of vaccines is helpful, but the results are not nearly so striking as those obtained with pneumococcus antibody solution. The latter should be given as early as possible. The speaker's results have been most gratifying.

Dr. George L. Schneider, Williamsport: Electrotherapy in Pneumonia.—This paper dealt with the use of diathermy. After its use, the temperature curve falls by lysis instead of crisis, even in lobar pneumonia. Diathermy does not aid in the formation of antibodies. In bronchopneumonia infra-red rays probably do better than diathermy. In lobar pneumonia the diathermy treatments should run from twenty to forty minutes, and the dosage should be gradually increased and gradually decreased at the termination of the treatment.

Dr. Raymond J. Bower, Williamsport: The Surgical Treatment of the Complications of Pneumonia.—Effusion should be drained early by aspiration, and the anesthetic of choice is local infiltration. The pus should be removed slowly. Rib resection is often necessary. Lung abscess and gangrene were discussed. Pericarditis with effusion, arthritis, otitis media, and pneumococcic peritonitis were mentioned as less frequent complications.

Discussion

Dr. Robert K. Rewalt, Williamsport, reported a case of measles complicated by lobar pneumonia on one side and bronchopneumonia on the other, in which infra-red treatments were used thrice daily. Alcohol in the form of whiskey, judiciously administered, is beneficial in the treatment of children.

Dr. Albert F. Hardt, Williamsport, stated that the primary object in empyema is to drain the cavity without the flow of tidal air. In pneumococcus empyema, open operation is good treatment. In the streptococcic type of empyema, with a larger cavity and no adhesions, the preferable treatment is by the closed method, i.e., trocar and cannula, to prevent collapse of the lung. Local anesthesia is the method of choice. Gas and oxygen may supplement it. A tube may be inserted through the cannula, and the fluid drawn off, and a bulb syringe used to keep up negative pressure every four or five hours. Dakinization may be done through the tube.

Dr. J. L. Mansuy, Ralston, said it would be a good thing for the State Department of Health to furnish pneumococcus serum, as is customary with diphtheria antitoxin.

Dr. P. H. Decker, Williamsport, said that otitis media often accounts for the continuation of fever in cases of pneumonia in children. The eardrums should be examined every day or so during convalescence.

W. Eugene Delaney, Jr., M.D., *Reporter.*

PHILADELPHIA

January 26, 1927

The president, Dr. Frederick S. Baldi, in the Chair.

Symposium by Crile Clinic

Problems Presented by Certain Lesions of the Urinary Tract.

Dr. B. H. Nichols: The Differential Diagnosis of Diseases of the Urinary Tract.—X-ray findings are very helpful in the differentiation of kidney disease from other disorders, notably chronic appendicitis, pathologic changes in the colon or spine, and gall stones. The location of the cecum can be determined, also a possible chronic appendicitis which, if the organ is situated low in the abdomen, may give only urinary symptoms. Carcinoma of the colon can be diagnosed with difficulty except by the x-ray, which shows the irregularity of the bowel; and diverticulitis of the colon may require a very careful x-ray study before it may be distinguished from stones in the urinary tract. Infectious arthritis of the spine with Pott's abscess, sacro-iliac tuberculosis or malignancy, or malignancy of a body of a vertebra may be demonstrated by a roentgenogram. Occasionally an elongated liver lobe may appear in the picture to refute a diagnosis of tumor or cyst of the kidney, or a hyper-

nephroma of the kidney may first be detected by the x-ray.

Thirty-three per cent of the cases of hydronephrosis have previously been operated on for appendicitis or gall stones or both, without relief from pain, making evident the necessity for a very careful differential diagnosis. With gall-bladder symptoms, an x-ray should never be relied upon, since ninety per cent of gall stones are difficult to visualize. A gall bladder which shows definitely on the x-ray is pathologic. About ninety per cent of kidney stones can be demonstrated by x-ray, and for the location of any stones stereoscopic plates should be taken.

Case reports: Male, aged 57, had pain in lower back for ten months. Urinary symptoms negative. Focal infection ruled out. Moderate colitis. Found left renal calculus on x-ray. Male, aged 31, had pain in left testicle and lower abdomen and neck of the bladder, and nausea. Shown on x-ray to have stone in left kidney, and on operation horseshoe kidney was found. Female, aged 64, complained of pain in back after a fall. Diagnosed arthritis. Urine had shown pus for several years. Stone demonstrated in left kidney by x-ray. Female, aged 23, four months pregnant, had several attacks of pain in the right upper back. Diagnosed gall-bladder disease and operated upon. No definite pathology found, and later when similar pains recurred, urologic examination showed stricture of the ureter. Two years later she returned with stone in the kidney.

Dr. George W. Belcher: Indications, Technic, and Findings in Pyelographic Examination of the Kidney.—Pyelography is a most important aid in diagnosing disease of the upper urinary tract, and there are five definite indications for it: (1) Pain which may indicate lesion of the upper urinary tract, (2) obstinate infection, (3) suspicious shadows in the urinary tract, (4) hematuria not due to disorder of the lower urinary tract, (5) to determine the relation of the ureter to tumors of the flank. The pains are often vague, radiating from side to back or inguinal region or thigh. In the male they most often come from disease of the posterior urethra, in the female from trigonitis. Pain may be entirely absent in the early stages of a perinephritic abscess. Just as in the bladder, an obstinate infection rarely occurs unless the outlet is obstructed, so in the kidney an obstinate infection is usually due to a blockage of the pelvis, which can be demonstrated by a pyelogram. Examination may prove an infected hydronephrosis due to pressure of an accessory renal artery against a redundant ureter, a stricture of the ureter, an incompetent ureteral orifice, causing back pressure, an incompetent ureteral-pelvic junction, ptosis of the kidney, atrophic pyelonephritis, or a renal anomaly.

When both kidneys are infected, a cystogram of the bladder should be made to demonstrate a regurgitation of infected (opaque) urine. Suspicious shadows in the tract, on pyelogram, may prove to be kidney stones, ureteral stones, calcified lymph glands, phleboliths (usually below the level of the bony pelvis), or tuberculous calcifications. All shadows associated with urinary symptoms should be investigated, studied with catheters in place, and a pyelouretogram made of the affected side. It must be remembered too, that calculi may not be opaque to the x-ray. When a spontaneous passage of blood in the urine occurs, unless its origin is definitely located, an examination of the entire urinary tract must be made. The surgical causes of hemorrhage from the kidney are stone, tuberculosis, papillary carcinoma of the pelvis, injury, and rarely, pyelonephritis. Pyelography gives valuable information in enlargement of the renal pelvis, hypernephroma of the lower poles, and retroperitoneal growths such as pancreatic cysts. The value of a pyelogram depends on the lesion present, and on the skill of making and interpreting the film. It is helpful to correlate symptoms, pyelogram, and operative findings.

Dr. C. H. Higgons: Blood-Chemistry Studies and the Preparation of Patients for Operation.—The mortality rate in prostatectomy has been lowered by improved pre- and postoperative management as well as by better operative technic. When done by the general surgeon there is a mortality of 22 per cent as against 5 per cent when the operation is performed by a genito-urinary surgeon, because of the latter's better pre- and postoperative care. The bladder, constantly contracting against an obstruction in these cases, develops trabeculæ, becomes fibrotic, with dilatation of the ureters, then through reflex dilatation of the calices a pyelonephritis results.

Prostatectomy is never an emergency operation, and the patient must be handled carefully since he is usually at the age of declining vigor. The cases fall into two classes: (1) with acute retention, (2) with difficult urination, nocturia, frequency, and occasionally incontinence. In the first group a sudden emptying of the bladder with its resulting fall in blood pressure, edema, congestion, and uremia, is fatal. Gradual relief is essential, preferably through the use of a soft rubber catheter, or if necessary, a filiform bougie or suprapubic puncture, then a retention catheter. After decompression these patients fall into class 2. The bladder should be irrigated twice daily with a urinary antiseptic, and a thorough examination made of the urine, the kidney function (blood chemistry and phenolsulphonephthalein), a rectal examination, and a general physical examination. If the symptoms are out of proportion to the prostatic enlargement, early tabes, calculus, diverticulæ, and tumor must be ruled out. While the phenolsulphonephthalein test (dye administered intravenously) in general will give an indication of a kidney lesion by demonstrating a low output, it does not show the reserve kidney function, and in these prostatic cases a blood-chemistry examination is vital, taken daily for one week, thereafter three times a week.

A conservative method of judging the operability of these cases is as follows: blood urea less than 20 mgm., good risk; less than 25 mgm., fair; between 25 and 30 mgm., to be operated with caution; over 30 mgm., prognosis bad. A hemoglobin of less than 60 per cent also makes for a bad prognosis and 40 per cent is decidedly unfavorable. A prostatectomy done when the hemoglobin is 30 per cent is fatal; therefore a transfusion must precede operation. The patient should be brought to such condition that the dye output remains more than 40 and the blood urea less than 30 mgm. for one week before operation. With retention catheter in place, water should be forced until there is a daily intake of 3,000 c.c. Luminal or bromides should be given to insure restful sleep. Fisher's solution should be given, or intravenous 10-per-cent glucose, 700 to 800 c.c., or a liter of physiologic saline intravenously. Cardiovascular lesions, if present, must be treated.

Sacral anesthesia is the method of choice since it relaxes, minimizes pain, and causes less strain on the heart. Nitrous oxid may be given in conjunction with the local anesthetic if the patient is apprehensive. Whether the operation be suprapubic or perineal, careful observation must be made to prevent complications. The patient must have a special nurse for forty-eight hours and an hourly blood-pressure reading taken. Frequent irrigation of the catheter will prevent obstruc-

tion by a clot, and the patient must be given at least 3,000 c.c. of water. The blood urea and creatinin are estimated on three successive days and then four times weekly. Pneumonia is avoided by cancellation of operation at the slightest sign of a cold, and the postoperative application of diathermy over the lower chest. Hemorrhage is eliminated by discontinuance of blind surgery. Uremia must be guarded against.

Slides followed demonstrating the beneficial effect of catheter drainage on the phenolsulphonephthalein and urea.

Dr. W. E. Lower: Points in Operative Technic.—Great care is needed in handling prostatectomy cases, since as a rule, the patients are old and infirm, and therefore handicapped. Sacral anesthesia is ideal, but it is essential that the patient be comfortable, and if the psychopathy is too great, general anesthesia must be employed. With the patient in the Trendelenburg position and the bladder filled, bladder hooks are inserted and the incision made. Suction is employed to complete dehydration. By suturing above and below the catheter it is possible in 75 per cent of the cases to eliminate any cavity which would require packing, and the bladder can be closed. Diverticulæ of the bladder are treated by packing with gauze, then cutting off the attachment and closing. If in these cases it is necessary to transplant the ureter, it should be cut on a slant and then tacked up. The bladder is closed by an apposition suture through the muscle, then overlapping surface sutures. A tumor should be thoroughly clamped off before removal by cutting above the clamps, so that it is always kept free from the other tissues.

In women, stones in the ureter palpable through the vagina may be removed per vagina. Stones high in the ureter are best removed through a small incision and after separation of the muscles; if very high, they are best reached through the posterior triangular space where it is not necessary to cut muscles or nerves, and hooked out through an incision in the kidney pelvis or a slit in the ureter. The kidney is not disturbed. For stones in the calices, a curet with lip turned toward the shaft is very useful. These patients leave the hospital in a week. Amputation of the kidney is performed by turning down the capsule, cutting off the amount of tissue required, and resuturing the capsule. Deaths from shock, hemorrhage, and infection have been reduced to a minimum. Deaths occasionally occur from thrombus, cerebral hemorrhage, or pneumonia.

YORK—FEBRUARY

The monthly meeting was held in the professional building on February 3d, with the president, Dr. E. S. Stambaugh, in the chair.

Dr. J. H. Sieling, of Shrewsbury, announced the compilation of a directory containing the names of all the physicians and surgeons of the county who served in the World War. The epitome contains an autobiographic sketch of each member, together with his Army and Navy service record.

Mrs. William S. McClellan, of Spring Grove, Pa., was the speaker, and discussed the topic, "The Doctor from a Patient's Viewpoint." She recognized that a general hostility exists among laymen toward the profession as a whole, even though the majority have confidence in their own physician. She attributes this mainly to two factors: overspecialization, and excessive fees, particularly of the specialists in the larger centers. She objected to the fact that patients are so often treated as cases, and attention paid only to particular organs when the personality as a whole needs attention. The indeterminate fee system is particularly pernicious from a patient's viewpoint, and the extreme professional etiquette which must be followed when a change of physicians is made is often very galling.

Mrs. McClellan praised the altruism and essential nobility of the profession, and described the ideal physician as one who combines medical knowledge with understanding and sympathy; who leads a clean, upright, moral life; who takes the lead in all health movements; who practices as well as preaches preventive medicine; and who, above all, keeps up with medical progress.

MILTON H. COHEN, M.D., Reporter.

The Woman's Auxiliary of the Medical Society of the State of Pennsylvania

MRS. SAMUEL BOLTON, *Editor*
4701 Leiper Street, Philadelphia, Pa.

COUNTY AUXILIARY REPORTS

PHILADELPHIA COUNTY

The regular meeting was held at the County Society Building, Philadelphia, on Wednesday, January 26, 1927. Mrs. Herman B. Allyn presided.

Dr. Joseph C. Doane, Superintendent of the Philadelphia General Hospital, gave a very interesting talk on the many and varied phases of hospital work. Several guests from the outlying counties were present, among whom was Mrs. J. Newton Hunsberger, president of the State Auxiliary, who brought a very enthusiastic message. At the conclusion of the business meeting, there was a short but delightful musical, after which tea was served. Mrs. Myer Solis-Cohen poured.

On Monday, January 31st, there were more than two hundred guests present at an afternoon of bridge given by the Auxiliary at Twenty-first and Spruce Streets. This was under the management of Mrs. R. C. Loving, chairman of the Hospitality Committee, and Mrs. E. A. Shumway. This was a huge success both socially and financially. The proceeds are to be devoted to payment for the piano which the Auxiliary presented to the new home of the Philadelphia County Medical Society.

MRS. GEORGE A. KNOWLES, Reporter.

WESTMORELAND COUNTY

The Auxiliary met Tuesday evening, February 1st, at the home of Mrs. C. C. Porter, of Greensburg. Mrs. Albert Porter and Mrs. P. G. McKelvey were joint hostesses with Mrs. Porter.

A brief business meeting was held at which several suggestions were made, the same to be voted upon next month. Among these was that the annual dues be raised from two to three dollars. A nominating committee was appointed, and instructed to prepare a ballot for use at the March meeting. It was decided that the latter should be preceded by a luncheon at the American Legion Home in Greensburg.

Miss Miller, of Greensburg, and Mrs. Silvis, of Harrison City, added greatly to the enjoyment of the evening by entertaining with songs and readings.

Bridge prizes were won by Mrs. C. D. Ambrose of Ligonier and Mrs. J. C. Brisbine of Greensburg. Refreshments were served by the hostesses.

MRS. P. G. MCKELVEY, Reporter.

THE

MEDICAL SOCIETY OF DELAWARE

DIPHTHERIA PREVENTION*†

C. A. SARGENT, M.D.
DOVER, DEL.

Among the remarkable advances in medical science in recent years has been the development of toxin-antitoxin as an immunizing agent for the prevention of diphtheria. This was preceded and made possible by the discovery and use of diphtheria antitoxin, which was discovered in 1890 but was not used generally by the medical profession until 1895. In 1903 Dr. Park, director of laboratories, New York City, began the use of toxin-antitoxin in immunizing horses for the production of antitoxin. The possibility of using toxin-antitoxin in active immunization of children was suggested and discussed by Dr. Theobald Smith in 1907, after the duration of immunity in guinea pigs produced by the use of toxin-antitoxin was shown to be about two years. The first attempts to immunize human beings against diphtheria by toxin-antitoxin were made by Behring, of Berlin, in 1913. During the same year Dr. Schick, of Vienna, discovered the test to determine susceptibility of individuals to diphtheria. Toxin-antitoxin was standardized and its practical application to large groups of children was begun by Drs. Park and Zingher in New York City in 1914.

Since that time its effectiveness has been demonstrated by the lowered death rate from diphtheria in cities where intensive campaigns have been conducted. The city of Auburn, N. Y., with a population of 37,000 had a diphtheria death rate of 48.9 per 100,000 in 1920. Between 1920 and 1923 an intensive toxin-antitoxin campaign was conducted in that city, a large proportion of children under 14 years of age being immunized. From July 1, 1923, until January 1, 1926, there was but one death from diphtheria. This death occurred in a nonimmunized child. In New Haven, Connecticut. the death rate from diphtheria in 1924 was 1.7 per 100,000 population, as compared with a rate of 11.2 for the State of Connecticut. This remarkable decline occurred after an intensive toxin-antitoxin campaign in that city. There was no intensive toxin-antitoxin campaign in the State. There are many other instances of marked decline in diphtheria death rate due to the intensive use of toxin-antitoxin.

It can best be determined whether the use of toxin-antitoxin is necessary in Delaware by an investigation of existing conditions. In 1925 the diphtheria death rate for the entire State was approximately 12.5 per 100,000 population. The city of Wilmington had a diphtheria death rate of 20.2 in 1925. Compared with cities of 100,000 population or over in the United States, Wilmington ranks fourth from the highest diphtheria death rate. During the period from 1890 to 1925, with the exception of 1920-24, Wilmington had the highest diphtheria death rate of any city of 100,000 population in the South Atlantic States, which include Delaware, Maryland, Virginia, North and South Carolina, Georgia, and Florida. Between the years 1920-24 Atlanta had a death rate of 13.3, and Wilmington was next highest with 11.6. However, Atlanta dropped in 1925 to 4.4, while Wilmington's death rate increased to 20.2.

The question naturally arises as to what is being done to correct existing conditions. On May 3, 1926, a toxin-antitoxin campaign was started in Sussex County. One thousand two hundred and seventy-six children were Schick-tested, and 936 given the immunizing doses of the toxin-antitoxin. When the schools closed, the work was discontinued because it is not possible to get the children together during the vacation. The campaign is now being conducted in New Castle and Sussex Counties, and will be continued throughout the school year in an endeavor to reach as many cities and towns as possible. The method employed was the Schick test and three inoculations of toxin-antitoxin.

The Schick Test. The reaction from the Schick test depends on the local irritant action of small quantities of diphtheria toxin when injected intracutaneously. If there is not sufficient antitoxin in the blood and tissues to protect the individual from diphtheria, a positive

*Read before the Medical Society of Delaware, Dover, October 12, 1926.

†From the Delaware State Board of Health.

reaction will apear in twenty-four to forty-eight hours. Dr. Schick advised the use of 1/50 the minimum lethal dose for a guinea pig weighing 250 grams, diluted with 0.1 c.c. normal saline solution. The preparations we have been using are 1/50 the M.L.D. in 0.2 c.c. normal saline solution. The 0.1 c.c. dilution is of advantage in that it permits considerable deterioration of the toxin and still leaves it strong enough to be effective. While it is desirable to inject exactly 0.2 c.c. of the toxin, yet a variation of from 0.1 c.c. to 0.3 c.c. will give fairly consistent results.

The 1-c.c. tuberculin syringe and 26-gauge ½- or ¼-inch needle are used. The flexor surface of the forearm is bathed with alcohol. The needle is inserted intracutaneously so that the oval opening of the needle is seen through the superficial layers of cells. The injection must be made intracutaneously so that the toxin will remain in the dense tissues and have time to exert its irritant action. The result should be a wheal or slightly raised white area at the point of injection.

The Positive Reaction. The positive reaction appears in 24 to 48 hours. It is characterized by a circumscribed area of redness and slight skin infiltration from one to two centimeters in diameter. This reaction remains from five to fourteen days, and on fading usually leaves a brownish pigmentation. Slight superficial scaling may result.

The Pseudoreaction. A protein reaction may result which has nothing to do with the true reaction to the toxin. In most cases this reaction comes on more promptly, covers a larger surface, is more of the urticarial type, has a more reddened central area and a lighter surrounding zone, pigmentation is usually absent, and scaling is very rare. This reaction disappears usually within four days. Because of the possibility of pseudoreaction, it is thought advisable by some to do the control test. This is done by injecting the heated toxin intracutaneously on the flexor surface of the other forearm. The same amount of solution is used as for the Schick test. The toxin is heated to 75° C. for one hour. In this way the amount of protein reaction can be noted. Any case in which there is any doubt should be treated as a positive reaction. It has not been our practice to do the control test because the Schick readings are not taken for four days and also because the reaction to the first inoculation of toxin-antitoxin is closely observed.

Due to the fact that such a large percentage of children are susceptible, it is not necessary to do the Schick test. In starting the work, we did the Schick test, however, until we could determine general susceptibility to the disease. We are now using the modified Schick test. Instead of giving the intracutaneous test, the child is inoculated with the first dose of toxin-antitoxin, subcutaneously in the arm near the insertion of the deltoid. One week later, when the second inoculation should be given, the reaction to the first inoculation is noted. If there is a local erythema at the point of inoculation, the child is given the remainder of the treatment. The local reaction is more severe than that of the Schick test, but not enough to discourage its use as a routine measure. The toxin in the toxin-antitoxin used has an L+ dose of 0.1. The L+ dose means the quantity of toxin neutralized by antitoxin which will kill a guinea pig weighing 250 grams in about four days.

One cubic centimeter of the solution is used. A small area of skin on the arm at the insertion of the deltoid is painted with iodin. The injection is made at this point, and then the iodin is washed off with alcohol. After seven days a similar injection is made in the opposite arm, and the last injection is made seven days after the second in the arm in which the treatment was started.

Neither antitoxin or toxin-antitoxin have any effect on the diphtheria germs lodged in the noses or throats of carriers. They will continue to be carriers regardless of how much antitoxin or toxin-antitoxin is given, unless other measures are taken to remove the bacteria from the nose or throat. Their action is entirely upon the toxins produced by the bacteria and not upon the bacteria directly. Approximately two per cent of all individuals are diphtheria carriers. Of this number one in five are virulent carriers.

The dose is of the same size for all three inoculations. There is no age limit, but it is not practical to treat an infant under six months of age because the majority of them receive a natural immunity from the mother which lasts about that length of time. Dr. Park, of New York, inoculated 2,100 infants on the third, sixth, and ninth days after birth. After a lapse of twelve months he retested many of them and discovered that they had the same average immunity as untreated infants. He concludes that this age is too young. His explanation is that the infant's cells may not yet have acquired the ability to produce antitoxins.

The duration of immunity can be determined only after the lapse of years. Park and Zingher report that the immunity persists remarkably well, there being almost no change from year to year. Park states that it appears as probable that the vaccine has not only stimulated a production of antitoxin but has aroused the cells

to an activity which before remained dormant, so that these persons who before made no antitoxin join the larger group who normally produce it.

Approximately 95 per cent of all individuals inoculated with three doses of toxin-antitoxin become protected within six months. Because there are some who are not protected by the three inoculations, we are doing the Schick test six months after the last inoculation, that the treatment may be repeated if necessary and the child protected.

The results of a questionnaire sent out by the American Public Health Association are as follows:

Question 1. Do you recommend diphtheria toxin-antitoxin as a routine to preschool and school children without prior Schick?

Answer. Yes 35; No 4.

In practical application, toxin-antitoxin now seems to be advised in the early years of life without a prior Schick test in nearly all States of the Union. It can be looked upon as a standard practice.

Question 2. Do you advise the Schick test after toxin-antitoxin when given to children routinely as a part of the program?

Answer. Yes 29; No 7.

In this State we are doing the Schick routinely six months after the toxin-antitoxin in an endeavor to be positive that all cases treated are protected.

Research work is now being done by Dr. W. P. Larson, of Minneapolis, on another type of immunization against diphtheria that should be mentioned at this time. To quote Dr. Larson, "Having found that many pathogenic bacteria such as pneumococci and streptococci were rendered noneffective by treatment with sodium ricinoleate, we studied its effects on bacterial toxin. We found that tetanic toxin and diphtheritic toxin were instantly detoxified in a solution of purified castor-oil soap when mixed in the proper ratios, yet their antigenic properties remain unimpaired."

Dr. Larson used a solution of 0.125 L+ toxin in a 2-per-cent castor-oil soap solution, only one injection intramuscularly being used. Immunity was established in 38.5 per cent of his cases within five weeks, some cases giving a negative Schick in ten days. The immunity is not established by toxin-antitoxin until two to six months after the last inoculation.

If this method becomes practical, it will have several advantages over the toxin-antitoxin method. Only one dose will be required, immunity will be established in a much shorter period of time, there will be no local or constitutional reaction, and if it should be necessary to use antitoxin before an immunity is established, there will not be the possibility of an increased anaphylactic reaction.

There are two forms of anaphylactic reaction, the mild and severe. In the mild form there appears in the days following the injection of serum a swelling and sensitiveness to pressure of the lymph nodes which drain the site of injection. This may persist two or three weeks. The commonest clinical manifestation is the exanthem, or serum rash, which usually appears from the seventh to twelfth day after injection. It ordinarily begins at the site of injection and usually spreads with an irregular distribution over the entire body. It is an urticaria-like erythema, with large irregular areas. Itching is usually severe. Fever may be present, and last several days. Malaise and pain in the joints are seen at times. The eruption never involves the mucous membrane of the mouth. The rash usually lasts two or three days, but is rarely severe for more than twelve hours.

The more severe reaction is extremely rare. It may occur in a particularly susceptible individual after the first injection, but is seen more after the second injection made during the period from twelve days to three months after the first. In such cases the reaction appears immediately, from a few minutes to a few hours after the injection. There is marked malaise and muscular pain. Severe edema and erythema rapidly appear at the site of injection, there is general urticaria, at times a marked edema of the face, and occasionally marked dyspnea and threatening collapse are seen.

The mild form may occur in about 10 per cent of cases, but the severe form is extremely rare. These reactions do not occur as above described, in the use of toxin-antitoxin.

Toxin-antitoxin does not produce an immunity until two to six months after the last injection. In case a child should develop diphtheria or become exposed before immunity is established, if he is asthmatic or has given a history of a previous serum reaction, it is advisable to administer antitoxin in the following manner: A subcutaneous injection of 0.1 c.c. of serum is given, repeating the same dose every fifteen minutes until a total of 0.5 c.c. has been given, followed by two or three subcutaneous injections of 0.5 c.c. at half-hour intervals. Then 0.5 c.c. may be injected intravenously (or intramuscularly) every half-hour until 5,000 units have been given, followed by the full dosage if no untoward symptoms occur.

In rare cases when symptoms of anaphylactic shock appear, adrenalin, 1 : 1000 solution, should

be administered (5 to 10 c.c.). Atropin (gr. 1/150) should be given subcutaneously. If dyspnea and cyanosis are extreme, artificial respiration is indicated.

DOSAGE OF ANTITOXIN

	Mild Cases	*Early Moderate*	*Late Moderate & Early Severe*	*Severe and Malignant*
Infants under 2 yrs. (10 to 30 lbs.)	2,000–3,000	3,000–5,000	5,000–10,000	7,500–10,000
Children under 15 yrs. (30 to 90 lbs.)	3,000–4,000	4,000–10,000	10,000–15,000	10,000–20,000
Adults (90 lbs. and over.)	3,000–5,000	5,000–10,000	10,000–20,000	10,000–50,000
Method of administration	Intramuscularly	Intramuscularly	Intravenously	Intravenously

The subcutaneous method of injection should be reserved for prophylactic purposes only, where it can be used in doses of 1,000 units for adults or 500 units for small children.

Antitoxin given intravenously becomes effective ten times as quickly as in the intramuscular method. An absolutely clear preparation should be used for intravenous injection. The antitoxin should be kept at or near 98.6° F., and given slowly, not more than 1 c.c. per minute. If it is not practicable to use the intravenous method, the intramuscular method is used, giving a much larger dose.

There is a remote possibility of a child being exposed to diphtheria or contracting the disease in the interval between the last inoculation of toxin-antitoxin and time when immunity is established. The small amount of antitoxin in the toxin-antitoxin solution is sufficient to sensitize to diphtheria antitoxin. It is this sensitization which is undesirable should it be necessary to give serum from the same species of animal to an individual who is already toxic from the infection. However, I do not think the possibility of an anaphylactic reaction should deter any physician from using toxin-antitoxin, or from using antitoxin later if it is necessary. The patient may be desensitized if antitoxin must be given.

Before starting the work in the counties we have met the county medical societies and made an attempt to gain the coöperation of the physicians. We have asked them to assist in the clinics at a fee to be established by them. There are several reasons for this. First; we do not care to do any work that would tend to lower the physician's income. There are parents who would take their children to the family physician for the inoculation and pay the regular fee. There are hundreds who have not done so, but would pay a small fee to have the work done in a clinic. By establishing a small fee for the entire immunization, we are able to give the physicians a fair return for the time expended. There are instances of a physician getting as much as $150 for about an hour's work on three afternoons. The second reason for asking the physicians to assist at the clinics is that many parents want their physician to administer the toxin-antitoxin in preference to a strange physician. Another reason for this method is that there will be a physician or physicians in each community working in the clinics whom parents can consult regarding the advisability of the work.

Our aim is to convince parents that this is not purely a State organization having no special interest in their particular child, but that their own physician is taking part in the work and can recommend the immunization or not, as he considers best for their child. After the work is done, the parents will know that their own physician, who assisted in the clinics, is available if any condition should arise needing his attention. This is of advantage because if any condition from a toothache to measles should develop after the administration of toxin-antitoxin, its cause may be considered to be due to the immunization. The physician can assure his patients that there is seldom any constitutional reaction. During the first twelve hours after the inoculation, among adults and older children there may be headache, backache, chills, and a slight rise in temperature. This is rare, however, and quickly passes away.

Everything necessary to conduct the toxin-antitoxin clinic is provided. The physician is merely asked to give the inoculation. It is not necessary for him to bring any equipment to the clinics. A clerk takes the name and age of the child as he enters the room. His arm is painted with iodin, and he passes on to a table where he is inoculated by the physician. A nurse removes the needle from the syringe, puts it back in the sterilizer, attaches a sterile needle to the syringe, fills the syringe with toxin-antitoxin, and gives it to the physician for the next inoculation.

Antitoxin and toxin-antitoxin may be obtained from the office of the State Board of Health free of charge by any physician who may wish to use it.

ABSTRACT OF DISCUSSION

A. T. DAVIS, M.D. (Dover, Del.): This is one of the most important activities of the State Board at the present time, but notwithstanding the work that has been done, we still have a very high death rate. This is a reflection, not only upon the Board, but upon us as

practicing physicians, when other states are showing lower death rates.

The State Board of Health, as at present organized, does not practice medicine. We want the coöperation of the physicians in this work, for it is particularly their line of work. If we can secure a great group of children for the first inoculation, the parents will continue to bring their children in, regardless of special drives, and we are now getting a number of families interested.

In one city of 200,000 during 1925 there were only 14 cases of diphtheria and 1 death, whereas, when they first began the use of toxin-antitoxin in 1921, they had 484 cases with 68 deaths. This shows what can be accomplished by pushing this work.

J. A. Ellegood, M.D. (Wilmington, Del.): Many parents have heard of anaphylaxis, and fear immunization for this reason. If they are instructed on this point there will probably be less opposition.

Dr. Davis: In the entire use of toxin-antitoxin there have been only two instances of trouble from anaphylaxis. One occurred in Boston several years ago with some frozen toxin-antitoxin. In both cases it was the fault of the material. Our toxin-antitoxin is kept continuously in a Frigid-Air chest, and is always fresh. If not used, it is turned in probably slightly before the potency date expires, so as to have new fresh material always on hand.

Dr. Sargent (in closing): I should like to stress the point that toxin-antitoxin is perfectly harmless. This is proved by the fact that so many patients have been treated, including infants only three or four days old, without ill effects. We try to be as careful as we can not to have any infection, and I have not seen any infected arms. There is no danger of an overdose, because each ampoule holds the proper number of cubic centimeters.

A motion was made by Dr. E. R. Mayerberg, Wilmington, and unanimously adopted, that the Medical Society of Delaware go on record as approving the work that is being done by the State Board of Health at the present time, and that it be given wide publicity.

COUNTY SOCIETY REPORTS

NEW CASTLE—JANUARY

The January meeting was called to order by the president, Dr. Charles P. White. Drs. William Speer and I. L. Chipman each reported a case of acute splenomyelogenous leukemia in the female. X-ray treatments caused marked temporary improvement in both cases.

Dr. Jesse Arnold, Philadelphia, made an informal address on recent advances in practical obstetrics. He discussed eclampsia, and said that he relies on venesection and the intravenous use of magnesium sulphate in treatment. As a means of prevention, he has his patients eat five small meals daily, and absolutely forbids large meals. Drs. John Palmer, Lewis Booker, Clyde Neese, Lewis Chipman, and Albert J. Strikol participated in the discussion.

Dr. White called for a discussion of the Klair Law. Dr. Veasy (Senator) said that the outlook, so far as we are concerned, is hopeless, and that he intended to support his constituents, the drys. Dr. Robin replied to Dr. Veasy, saying that he felt we should strengthen the hands of the wets. He also said that he not only is opposed to the Klair Law, but also to the Volstead Act. Dr. LaMotte, as secretary of the State Society, said that through the medium of a questionnaire he was able to ascertain that 90 per cent of the doctors of the State favor a change in the Klair Law.

The amendment proposed by Dr. M. A. Tarumianz at the December meeting was not voted upon, not enough members being present.

Dr. Neese informed the Society of a medical fakir who is among us selling a medical book and supplementing its deficiencies by a prescription. The matter was referred to the legislative committee.

Dr. Charles M. Hanby moved that a book be purchased for recording names of members attending the society meetings. Carried.

Brice Sewell Vallett, M.D., Reporter.

SUSSEX—JANUARY-FEBRUARY

At the regular meeting held January 13, 1927, it was decided to raise the annual dues from $5 to $6. The following resolution was also adopted: "That the Sussex County Medical Society endorses any movement looking toward the repeal of the Klair Law in so far as it affects the practice of medicine."

Following the business meeting, Dr. Charles T. Fisher, of Salisbury, Maryland, read a paper on "Appendicitis and its Differential Diagnosis." This was followed by a general discussion.

A very successful and well-attended meeting was held at Beebe Hospital, Lewes, on February 10th. Dr. P. W. Tomlinson, of Wilmington, who has long been associated with insurance companies, delivered a paper on "Prognosis in Pneumonia." He opened with the incontrovertible opinion that "He heals best who is most certain of the cause of the disease." This is true in view of the fact that in 70 per cent of all cases of croupous pneumonia the presence of pneumococcemia is established by modern bacteriologic methods. In the prognosis of this disease the outstanding factors are: (1) The malignancy of the infecting organism. The bacteremia and toxemia is proportionate to the infecting strain. (2) The effect of the toxemia and associated local lung lesion on the cardiovascular system. This is the paramount issue in the prognosis, for abnormally high blood pressure, with a slow, tense pulse early, is always of serious significance. On the other hand, a falling pulse rate is likewise unfavorable. (3) The resistance offered by the patient. Obese, diabetic, and alcoholic subjects offer a very poor prognosis. (4) The extent of pulmonary and associated lesions. The consolidation plays a part proportionate to its lung involvement. Associated diseases of the heart, lungs, kidneys, and other systems add enormously to the danger of an ill fate. Each of these factors was exemplified by further details.

Dr. J. A. Avraek, of Beebe Hospital, discussed "Eclampsia," with a report of five recent cases treated at the institution. In view of the fact that the etiology still remains uncertain and the prognosis grave, Dr. Avraek insisted that the death rate of this unfortunate toxemia could be greatly reduced by proper and routine prenatal care, keeping ever in mind the possibility of this complication. Although it may attack like a bolt from a clear sky, he emphatically pointed out that, whether it was due to the doctor's or the patient's neglect, there was a laxity in routine and proper care during pregnancy. In one instance, the patient gave a history of persistent headache, along with moderate nausea and vomiting for ten weeks preceding the attack. There had been no urinalysis for the last four months. Edema had been present since the third month; yet the patient failed to report to her doctor until the day preceding her developing eclampsia. Early recognition, prompt institution of conservative measures, and

finally, as a last resort, operation, is the classical treatment. Overeating in relation to elimination is an essential factor, as shown by two of the five cases reported, coming on after Christmas dinners. In conclusion, Williams's view was quoted—that if we cannot prevent or cure eclampsia, we can remove pregnancy if the case be handled properly. All the patients considered were of fair complexion and light or sandy hair, suggesting that eclampsia "prefers blondes."

The program was followed by refreshments served in the dining hall of the hospital's new addition, which the visiting physicians were invited to inspect.

J. B. Waples, Jr., M.D., Secretary.

MEDICAL NEWS

Deaths

Nathan W. Mastin, M.D., of Wellsboro; New York University Medical College, 1879; aged 79; February 4.

Albert Pettit, M.D., of Pittsburgh; Jefferson Medical College, 1884; aged 68; January 20, of pneumonia.

Charles O. Henry, M.D., of Allentown; Medico-Chirurgical College of Philadelphia, 1899; aged 50; January 30.

Erick A. Adams, M.D., of Wilkes-Barre; University of Pennsylvania School of Medicine, 1913; aged 36; recently.

Everett W. Sheets, M.D., of Beaver Falls; Jefferson Medical College, 1885; aged 66; in January, of pneumonia.

James B. Ewing, M.D., of Uniontown; Jefferson Medical College, 1866; aged 83; January 7, following a long illness.

John K. Blanck, M.D., of Wrightsville; Jefferson Medical College, 1882; aged 64; February 16, of cirrhosis of the liver.

Victor C. Roberts, M.D., of Highland Park; Medico-Chirurgical College of Philadelphia, 1892; not in practice; February 17.

William Moffet, M.D., of Philadelphia; Jefferson Medical College graduate; practiced more than fifty years; aged 72; February 13.

Samuel M. Howell, M.D., of Pittsburgh; Jefferson Medical College, 1903; aged 57; January 10, of atrophic cirrhosis of the liver.

Ethan A. Gearhart, M.D., of Allentown; College of Physicians and Surgeons, Baltimore, Md., 1884; aged 69; February 8, of pneumonia.

Robert J. Young, M.D., of Snow Shoe; College of Physicians and Surgeons, Baltimore, Md., 1889; aged 64; August 5, 1926, of cerebral hemorrhage.

Roswell J. Rothrock, M.D., of Philadelphia; son of Dr. and Mrs. Marand Rothrock, of Mount Pleasant Mills; aged 43; February 1, after a long illness.

George Holland, M.D., of Philadelphia; Jefferson Medical College, 1886; retired physician but an active druggist; aged 74; February 8, of heart disease.

Mrs. Corinne Stern Neuberger, fiancée of Dr. David Kapp, of Philadelphia, died of influenza, January 25, two days before they were to have been married.

Rebecca P. Laughlin, M.D., of Philadelphia; Woman's Medical College of Pennsylvania, 1897; practiced in Waynesboro more than twenty years; aged 74; January 26, of heart disease.

James P. Shaw, M.D., of Pittsburgh; Medical Department of Columbia College, New York, 1890; served during the World War; aged 62; in January, of a self-inflicted bullet wound.

Horace R. Smith, M.D., of Altoona; Medical Department of the University of the City of New York, 1880; formerly a medical missionary in China; aged 71; December 10, 1926, of pneumonia.

Mary D. Ridgway, M.D., of Philadelphia; Cleveland-Pulte Medical College, 1898; founder of the Providence General Hospital, Germantown; promoter of the Tourist Hotel in Reading; aged 63; February 4.

William C. Crawford, M.D., of Nazareth; Jefferson Medical College graduate; Civil War veteran; served several years as postmaster after his retirement from the practice of medicine; aged 93; February 22, following a stroke.

Francis B. McDowell, M.D., of Philadelphia; University of Pennsylvania School of Medicine, 1866; practiced medicine more than sixty years and was attending physician at the Northern Dispensary for many years; aged 81; February 9.

Robert H. Bolling, M.D., of Philadelphia; University of Pennsylvania School of Medicine, 1889; cousin of Mrs. Woodrow Wilson; held the rank of major in the Medical Corps during the World War; aged 59; February 18, following an operation.

Births

To Dr. and Mrs. F. G. Runyeon, of Reading, a son, recently.

To Dr. and Mrs. John D. Boger, of Lebanon, a son, February 17.

To Dr. and Mrs. William W. Van Dolsen, of Philadelphia, a son, January 27.

To Dr. and Mrs. William H. Ziegler, of Philadelphia, a daughter, Ruth Nancy, February 5.

Engagements

Miss Caroline Shaffner, of Hummelstown, and Dr. Ralph Pilgrim, of Harrisburg.

Miss Josephine Wayne and Mr. James S. Hatfield, son of Dr. Charles J. Hatfield, of Philadelphia.

Miss Florence Edith Heritage, of Philadelphia, and Dr. Dudley Pomp Walker, son of Dr. and Mrs. William P. Walker, of Bethlehem.

Miss Kathleen Beates, daughter of Mrs. Beates and the late Dr. Henry Beates, Jr., of Wayne, and Mr. George N. Carpenter, of Brookline, Mass.

Marriages

Miss Aileen Dixon to Dr. Jefferson H. Clark, of Philadelphia, at Payson, Utah, January 1.

Mrs. Amory Hare Cook, daughter of Dr. and Mrs. Hobart A. Hare, of Philadelphia, to Dr. James P. Hutchinson, of Media, January 28.

Miscellaneous

Dr. and Mrs. W. Horace Means, of Lebanon, are taking a month's cruise to the West Indies.

Dr. and Mrs. George H. Denney, of Philadelphia, have gone to Florida for several months.

Dr. Alfred S. Weiss, of Lebanon, has resumed his practice after a prolonged period of illness.

Dr. and Mrs. J. P. Crozer Griffith, of Philadelphia, have returned home after a cruise in the West Indies.

A polluted well was responsible for a small outbreak of typhoid fever at Avella, Washington County, during February.

Georgetown University Medical School has a course in aviation medicine, the first of its kind to be given at any university.

A BEQUEST OF $150,000 for the York Hospital was contained in the will of Ambrose Strickler, of York, who was found dead, February 5.

DR. WILLIAM G. SPILLER has resigned from the neurological staff of the Philadelphia General Hospital, owing to the press of other work.

DR. DAVID W. KRAMER, of Philadelphia, has been appointed chief of the Department of Metabolic Diseases of the Northwestern General Hospital.

DR. DOROTHY CASE-BLECHSCHMIDT, of Philadelphia, has been appointed chief in surgery to the staff of the Woman's Hospital of Philadelphia.

DR. AND MRS. R. B. HAYES, of Jersey Shore, sailed on January 28 on a nine weeks' tour. They will visit Egypt, the Holy Land, Spain, France, and Italy.

AN EPIDEMIC OF MUMPS among the students necessitated the closing of Franklin and Marshall Academy, Lancaster, for two weeks during the month of February.

DR. GEORGE T. RITTER, of Williamsport, was recently elected a member of the Board of Education to fill the unexpired term of Elmer C. Emerick, deceased.

DR. WILLARD H. KINNEY, associate in urology at the Jefferson Medical College, has been appointed urological surgeon to the Philadelphia General Hospital.

THE SIXTH ANNUAL CONVENTION of the Hospital Association of Pennsylvania will be held in the Hotel Adelphia, Philadelphia, April 20, 21, and 22, 1927.

THE SIXTH ANNUAL CONVENTION of the International Society for Crippled Children was held in Cincinnati, Ohio, February 16 and 17, with headquarters at Hotel Sinton.

MEAD JOHNSON & COMPANY, of Evansville, Indiana, has hitherto been privately owned, but a minority interest was recently sold to a banking group, and stock is now on the market.

BECAUSE OF AN OUTBREAK of four cases of scarlet fever, the Penn Grove Grade School in Chester County, between Lincoln University and Forrestville, has been closed, by order of the school board.

DR. CHARLES H. MINER, of Wilkes-Barre, former Secretary of Health, was elected president of the Pennsylvania Tuberculosis Society at its thirty-fifth annual meeting at Scranton, January 26.

ACCORDING TO A SURVEY by the Department of Commerce, New York showed the greatest infant mortality among the cities of the country last year, with 8,308 deaths. Chicago had 4,460, Philadelphia 3,007, and Detroit 4,564.

DR. WILLIAM G. TURNBULL has been reappointed Deputy Secretary of Health by Governor Fisher. Dr. Turnbull came into the Health Department under former Governor Sproul and was Deputy Secretary during the Pinchot administration.

DR. ROBERT A. KEILTY has resigned his position as pathologist at the Geisinger Hospital, Danville. He will be succeeded by Dr. Kenneth Fowler, who formerly had charge of the clinical laboratories at the Ann Arbor Hospital, Michigan.

THE ILLINOIS SOCIETY FOR THE PREVENTION OF BLINDNESS is making a film to be used in the education of mothers and others to the necessity of prompt attention to the eyes of children at birth to prevent blindness or sight impairment.

THE MEDICO-LEGAL SOCIETY, at a dinner on the night of January 25, urged that the civic societies and organizations support the campaign to curb unnecessary noises in the city of Philadelphia. Dr. William Morton Kennedy was elected president of the Society.

DR. ROSS HALL SKILLERN, of Philadelphia, was a special guest of the Kansas City Ear, Nose and Throat Society at their annual meeting held at St. Joseph on January 20. After conducting an operative clinic, he was elected an honorary member of the Society.

THE WILLIAM G. WARDEN estate and members of the Board of Managers of Germantown Hospital, Philadelphia, have contributed $150,000 toward the $600,000 goal set in the institution's drive which will open March 25. The money will be used for building expansion.

DR. FLORENCE E. KRAKER, of Media, has been appointed physician at the County Home at Lima, Delaware County, to fill the post formerly held by Dr. Marshall Harvey. Dr. Kraker was at one time resident physician in the Margaret Williamson Hospital in Shanghai, China.

AN EPIDEMIC OF INFLUENZA has broken out in London, England, and surrounding towns. In London alone, 200 deaths were recorded in one week, while 470 deaths were reported in the 105 largest towns outside of London. In some of the poorer districts of London, people had to stand in line to obtain death certificates.

AS THE RESULT OF steadily increasing business in Delaware County, Walton Service, Inc., of Philadelphia, has opened a branch office at 6812 Market St., Upper Darby, Pa. The new quarters are now fully equipped and in operation, affording every facility for the prompt collection of delinquent accounts in that section.

DR. THEODORE DILLER, of Pittsburgh, delivered an address on "Pioneer Medicine in Western Pennsylvania" before the New York Academy of Medicine, February 24. At the same meeting Dr. H. N. Malone, of Pittsburgh, discussed the life and work of Albert G. Walter and exhibited a number of colored drawings and original case histories.

SEVERAL DOCTORS AND MIDWIVES in Shenandoah and vicinity have been arrested because of their failure to file birth certificates with the local registrar. They have been prosecuted before local Justices of the Peace, and in some instances fines have been imposed, while in others orders were issued to file missing certificates or else enter bail for appearance at Court.

DR. FRANK BILLINGS is to be honored by the University of Chicago Medical School, which recently announced that it would call the new clinic of internal medicine of the University the Frank Billings Clinic in recognition of his long service in teaching, and in medical research. Dr. Billings also has taken an active interest in the development of hospital service.

PHYSIOTHERAPY AIDES and occupational therapy aides in arts and crafts, agriculture, and trades and industrial occupations are needed in considerable numbers by the hospitals of the Veterans' Bureau in connection with the rehabilitation of disabled soldiers and sailors. Full information may be obtained from the United States Civil Service Commission, Washington, D. C.

THE FUND TO BE DEVOTED to the further development of the University of Pennsylvania's medical facilities reached the $1,235,000 mark February 24, when the receipt of new gifts totaling more than $135,000 was announced. A total of $3,050,000 is sought. An anonymous friend of the University has promised to endow the heart subclinic as part of the Maloney Memorial Clinic.

THE *Chicago Evening Post* recently made the statement that at least 60,000 deaths have been caused by a virulent epidemic of relapsing fever which has been creeping across the continent of Africa from west to east the last few years. The disease is carried by vermin. Quarantine stations have been established and other measures taken to curb the fever but with little success.

THE NORRISTOWN STATE HOSPITAL FOR THE INSANE has asked the Legislature for a blanket appropriation of $2,081,300. That amount, for 1927 and 1928, is

nearly $2,000,000 more than the amount appropriated for the last two years. The sum has been asked to finance a big program of improvement and expansion of facilities at the hospital, including erection of several new buildings and purchase of 500 acres of land.

ABOUT 1,000 FEWER CASES of diphtheria occurred in Philadelphia in 1926 than in the preceding twelve months, according to a statement by Dr. Wilmer Krusen, Director of the Department of Public Health. He attributed the decrease to immunization of children by the department. During the year 1926 the department stressed the elimination of diphtheria and conducted an intensive campaign urging the acceptance of Schick testing and immunization.

THE BERKS COUNTY MEDICAL SOCIETY, through its Committee on Postgraduate Instruction, on February 8 announced a six-day course in tuberculosis at the County Sanatorium, Reading. Both clinical and didactic work is planned. The course is designed by the Pennsylvania Tuberculosis Society, and it is understood that other county medical societies will be given an opportunity to utilize the specialists and curriculum, which will be supplied to counties having sufficient facilities.

WITH THE EXCEPTION of two bequests of $100 each, the entire estate of William V. Butler, who died in St. Agnes' Hospital, Philadelphia, January 26, amounting to $104,000 is left to charity. The institutions which will share the estate are St. Mary's Hospital, St. Agnes' Hospital, Presbyterian Hospital, Convalescent Home, Darby; Little Sisters of the Poor; Home for Crippled Children; House for Homeless Industrious Boys; St. John's Asylum for Boys; and Temple University.

DRS. EDWARD H. BEDROSSIAN and J. V. Allen, Jr., of Philadelphia, G. L. Laverty, of Harrisburg, have been selected by the Department of Commerce in Washington as medical examiners of candidates applying for air-pilots' licenses. Dr. Louis H. Bauer, medical director of the aëronautic branch, Department of Commerce, is endeavoring to establish air-medicine courses in leading medical institutions. To make the medical tests which a licensed pilot must pass requires an intimate knowledge of ophthalmology and the nervous system.

THE NORTHAMPTON COUNTY MEDICAL SOCIETY is giving a seminar on gastro-enterology under the auspices of the postgraduate medical school of the University of Pennsylvania, alternately at Bethlehem and Easton, which consists of lectures, lantern slides, and demonstrations by specialists. The seminar is being held Thursday afternoons. It began February 17, and will continue to May 5. There were forty-four physicians signed up at the time of the announcement, which would make the cost of the course to each one about 70 cents a week.

FINES TOTALING $20,982 were paid by 10,652 persons summoned to court during 1926 for violation of the Sanitary Code by the fifty uniformed policemen assigned to the Health Department of New York City. The offenders were owners of unmuzzled dogs, subway smokers, spitting in public places, merchants convicted of keeping foodstuffs uncovered, and uncovered garbage receptacles. During the year the squad investigated 9,828 cases of persons who were bitten by dogs. The animals were killed or kept under observation long enough to give assurance that they were not suffering from rabies.

THE BUCKS COUNTY MEDICAL MONTHLY has just completed its seventeenth year of existence. Dr. Richard H. G. Osborne has contributed 198 poems during this time, which indicates that his personality has been manifest in all the issues of the *Monthly*. This in itself is a very unique record, and the thanks of the medical profession are due Dr. Osborne. More than passing notice must be given to the coöperation and good fellowship that have always marked the contact between the editor, Dr. John B. Carrell, and the managing editor, Dr. Anthony F. Myers, who is also Secretary-Treasurer of the Society.

A VERY DELIGHTFUL dinner was given by Mr. Milton Campbell, president of the H. K. Mulford Company, at the Art Club, Philadelphia, February 3, 1927, to meet Dr. Afranio do Amaral, of Brazil, who is directing the work in the Antivenin Institute of America; Dr. Harold Amoss, Division of Biology of Johns Hopkins Hospital, Baltimore, the originator of erysipelas antitoxin; H. A. Cheplin, late professor of bacteriology, Syracuse University, whose work on B. acidophilus has received general recognition; Dr. Rudolf Degkwitz, professor of children's diseases, Greiswald University, Germany, the discoverer of antimeasles serum, and who is at present visiting this country; Dr. F. M. Huntoon, Medical Director of the Mulford Biological Laboratories, whose antibody experiments have been generally accepted; and Dr. J. C. Small, Philadelphia, whose recent discovery of the causative agent of rheumatic fever is attracting the attention of the profession. It was intensely interesting to hear these gentlemen outline the development of their respective work. There were about fifty guests present.

A TESTIMONIAL DINNER in honor of Dr. Theodore B. Appel, Secretary of Health of Pennsylvania, was given under the auspices of the Lancaster Medical Club at the Hotel Brunswick, Wednesday, February 16, 1927. There were about one hundred and twenty-five present representing the various professions, the judiciary, and the business interests of the community. It was a wonderful tribute to Dr. Appel. Dr. C. Howard Witmer, president of the Lancaster Medical Club, was toastmaster. Addresses were made by Dr. Frank C. Hammond, of Philadelphia, "Our Guest as a Co-worker"; Dr. Wilmer Krusen, Philadelphia, "Trials and Triumphs of a Health Officer"; Dr. Carey J. Vaux, Pittsburgh, "The Physician in Public Health Administration." Among the guests present were Dr. Edward Martin, former Commissioner of Health of Pennsylvania and Dr. Charles H. Miner, retiring Secretary of Health. Dr. Martin was also called upon, and replied in happy vein. Drs. Harry W. Albertson, Walter S. Brenholtz and Arthur C. Morgan represented the State Medical Society. Several of the department heads of the State Department of Health were present.

AT THE FIFTEENTH ANNUAL MEETING of the Public Charities Association of Pennsylvania at Reading on January 20, Mrs. E. S. H. McCauley, newly appointed State Secretary of Welfare, made her first public address in her new capacity. Dr. Daniel J. McCarthy, Philadelphia, spoke in behalf of the proposed $50,000,000 bond issue to provide a ten-year building program for state-owned institutions for the mentally ill, epileptic, mental defectives, and penal offenders, stressing particularly the needs of the mental hospitals. Dr. Frederic H. Leavitt spoke on the phases of the Mental Hygiene movement. Mrs. Helen Glenn Tyson, Pittsburgh, discussed the needs of the Mothers' Assistance Fund. President Judge Paul N. Schaeffer, Reading, a director of the Association, presided. The annual election resulted as follows: President, Dr. Charles H. Frazier, Philadelphia; vice-presidents, Stanley Bright, Reading; Dr. Charles J. Hatfield, Philadelphia; Mrs. William Thaw, Jr., Pittsburgh; and Mrs. Mortimer B. Fuller, Scranton, the last taking the place of Mrs. J. M. Wainwright, Scranton, who was elected a director. George R. Bedinger, Philadelphia, was reëlected executive director and Charles S. Cheston, Philadelphia, treasurer. Additions to the board of directors were: Mrs. Worthington Scranton, of Scranton, vice-chairman of the Republican State Committee; N. M. Seabrease, Philadelphia; and Dr. Albert C. Buckley, Philadelphia.

THE ORGANIZATION OF A PENSION FUND for nurses and other health workers was launched in New York City in January with a gift of $50,000 by William E.

Harmon, retired real-estate operator, to provide for the initial organizing costs. The organization is to be known as the Harmon Association for the Advancement of Nursing, and has been incorporated in New York State as a non-profit-making organization. Under the plan outlined by Mr. Harmon, the association is to collect monthly payments from nurses who desire to become members and from their employers, and with the proceeds purchase annuities for the members to be paid after their retirement. It is expected that institutions and other employers of nurses will voluntarily contribute to the fund $5 a month for each nurse employed, that sum to be duplicated by the nurse. Should a nurse retire from the profession or desire to withdraw from the association she would get back the amount of her payments, but sums paid on her behalf by her employers would be placed in the general fund. Insurance actuaries have calculated that a payment of $5 a month by the nurse and $5 by her employer from the time she is 25 years old until she is 60 will provide an annuity of $778. It is expected that in practice that figure will be exceeded considerably by the growth of the fund through gifts and payments on behalf of nurses who drop out. Mr. Harmon states that by his observation as a member of the boards of several hospitals a nurse's earning capacity begins to diminish at 40 years of age and rapidly drops off after 50. Provision will be made for nurses to retire at earlier or later ages than 60 at proportionately smaller or greater pensions.

BOOKS RECEIVED

HOSPITAL HOUSEKEEPING AND SANITATION. By Nora P. Hurst, R.N. St. Louis: C. V. Mosby Company, 1926. Price, $1.25.

THIS BUSINESS OF OPERATIONS. By James Radley. Foreword by J. M. Withrow, M.D., Chief of Staff, Christ Hospital, Cincinnati, Ohio. Cincinnati: Digest Publishing Co., 1927.

A MANUAL IN PRELIMINARY DIETETICS. By Maude A. Perry, B.Sc., Director of Dietetics, The Montreal General Hospital, Montreal, Canada. St. Louis: C. V. Mosby Company, 1926. Price, $1.25.

LARYNGEAL TUBERCULOSIS. By Frank Robert Spencer, A.B., M.D., F.A.C.S. A chapter on Gross Postmortem and Microscopic Pathology by Philip Hillkowitz, B.S., M.D. Illustrations. Philadelphia and London: J. B. Lippincott Co.

NURSING MENTAL AND NERVOUS DISEASES. By Albert Coulson Buckley, M.D., Associate Professor of Psychiatry, Graduate School of Medicine, University of Pennsylvania. 57 illustrations. Philadelphia and London: J. B. Lippincott Co. Price, $3.

FOUR THOUSAND YEARS OF PHARMACY. An outline history of pharmacy and the allied sciences. By Charles H. LaWall, Ph.M., Phar.D., Sc.D., F.R.S.A., Professor of Theory and Practice of Pharmacy and Dean of the Philadelphia College of Pharmacy and Science. Illustrated. Philadelphia and London: J. B. Lippincott Co. Price, $5.

DE LAMAR LECTURES 1925-1926. A series of lectures in personal and public hygiene. By David Marine, Alice Hamilton, Francis Carter Wood, Fred. W. Sears, Thos. Adams, W. G. Smillie, Ed. R. Baldwin, Louis I. Dublin, Jos. Goldberger, C. R. Stockard, Horace Lo Grasso, Robbins B. Stoeckel, and Sir Arthur Newsholme. Baltimore: The Williams & Wilkins Co., 1927.

A PRIMER FOR DIABETIC PATIENTS. A brief outline of the treatment of diabetes with diet and insulin, including directions and charts for the use of physicians in planning diet prescriptions. By Russell M. Wilder, M.D., Section on Nutrition, Division of Medicine, Mayo Clinic. Third edition, reset. Philadelphia and London: W. B. Saunders Company, 1927. Price, cloth, $1.50 net.

BOOK REVIEWS

From a reviewer we expect information and advice which will guide us safely and to our profit, warning us of the poor, the mediocre, the commonplace, and inviting our attention to merit.

FACTS ON THE HEART. By Richard C. Cabot, M.D., Professor of Medicine, and Social Ethics, Harvard University. Octavo of 781 pages with 163 illustrations, Philadelphia and London: W. B. Saunders Company, 1926. Cloth, $7.50 net.

Accuracy, even more than a discriminating choice of language, is the quality that captivates in Cabot's writings. *Facts on the Heart* is a volume in which the findings after death have been compared with the clinical manifestations of heart disease as written on the patient's hospital history sheet. One such case alone, reviewed and compared by an analytical critic, rich in years of teaching experience, would be almost sufficient upon which to form an accurate appraisal of a given heart condition. Imagine what a fund of facts are found in a volume wherein Cabot analyzes nearly two thousand heart cases!

Facts on the Heart furnishes the authoritative answer to many questions that occur in everyday clinical acquaintance with the heart. For example, the writer of this review has had gradually forced upon him, from experiences in cardiac consultation practice, the conviction that perhaps forty per cent of the patients referred for "heart disease" do not have any actual structural (organic) heart-muscle fault. It is refreshing to find Cabot expressing the opinion, based on antemortem and postmortem studies, that "most heart disease is imaginary."

Again, the treatment of a defective heart is not so much a question of what value may be involved; it is more a matter of etiology. For with the cause of a heart defect suspected, treatment can be directed to *removal of the cause*. It is therefore much better that we follow Cabot's etiologic classification such as rheumatic, syphilitic, and hypertensive heart disease, let the valve involvement in any or all be what it may. As clinicians, we are especially interested in the proposition of benefiting our patients; a valve cannot be treated, but a causative factor can perhaps be removed.

As a third example of the value of the book: many of us have asked the question, "When auricular fibrillation is present, in what per cent of cases may the auricles contain blood clots?" *Facts on the Heart* gives the answer as twenty-five per cent. Those who might still make diagnoses for mitral regurgitation will be interested to know that Cabot found only four such actual cases in 4,000 necropsies. It is gratifying to have confirmed the clinical impression that syphilitic aortitis does not usually appear until fifteen or twenty years after the original syphilitic infection, and that the symptoms usually lead to death within two years. Now we should speak of the patient with an enlarged and often incompetent heart, which presents neither valve lesions nor pericarditis, as a case of hypertensive heart disease, rather than as chronic myocarditis, senile heart, and what not. It is reassuring to know that postmortem studies prove that some attacks of bacterial endocarditis have healed, and that recovery in children is probably not uncommon.

Facts on the Heart is a book that will delight the many thousands of physicians in America who cherish the ambition to become more proficient in the recognition of heart affections. He will be disappointed who expects to find within its covers a discussion of the relative value of various trade-marked digitalis preparations, as will also he who would hastily peruse a chapter and learn some occult treatment to charm away a heart defect. This book cannot be read hastily. It must be poured over, thoughtfully and at leisure, and each page reconciled with the reader's own observations and experiences—or each page used to form a basis for more correct observations in the future. Thus will the modern

conceptions of heart disease gradually be implanted in the reader's mind.

Richard Cabot has made a magnificent contribution to cardiology. And the publishers owe to American medicine the duty of keeping *Facts on the Heart* alive by frequent revisions, additions, and continued publicity.

PRINCIPLES OF PSYCHOTHERAPY. By Dr. Pierre Janet, Member of the Institute, Professor of the College of France. Translated by H. M. and E. R. Guthrie. New York: The Macmillan Company, 1924.

This volume is essentially an abridgement of Janet's two volumes on *Psychological Healing*. Part I deals with the "Evolution of Psychotherapies"—miracles, animal magnetism, cures derived from animal magnetism, therapies derived from religious practices, and psychophysiologic treatments. Part II deals with "Principles," in chapters captioned mental agencies, utilization of automatisms, the forms of mental economy, and psychic income. Part III deals with "The Results of Psychotherapy" in two chapters—applications and psychotherapy.

Janet's *Psychological Healing* is a detailed and scholarly presentation of the subject, an excellent reference book; whereas *Principles of Psychotherapy* discusses the subject in a brief yet perspicuous manner. It furnishes a comprehensive visualization of psychotherapy, which is employed by all physicians, even though unwittingly; as for example, when a physician assures the patient of recovery, moralizes with him, or in the administration of a placebo.

SKETCH OF THE HISTORY OF THE MAYO CLINIC AND THE MAYO FOUNDATION. From the Division of Publications, Mayo Clinic. Philadelphia and London: W. B. Saunders Company.

This brief history outlines the inception and development of the Mayo Clinic and the Mayo Foundation from the time that it began over twenty-five years ago. A chapter is devoted to Dr. William Worrell Mayo, the founder, and one to the youth and education of William J. and Charles H. Mayo. The development of the surgical and medical departments, laboratories, and specialties is outlined. The present organization of the Mayo Clinic and the Mayo Foundation is clearly described. There are many data in the volume that are of general scientific interest. The work as a whole makes interesting reading, as it reveals the possibilities of broad-minded, unselfish determination properly guided.

PRACTICAL SURGERY OF THE JOSEPH PRICE HOSPITAL. By James William Kennedy, M.D., F.A.C.S., Surgeon to the Joseph Price Hospital, Philadelphia. Cloth, pages 861, with 129 illustrations. Philadelphia: F. A. Davis Co., 1926.

Dr. Kennedy's book is not in any sense a surgical text, but rather a recording of some of the teachings and technic of the late Dr. Price, and which the author continues to use at the hospital founded by his predecessor. As Dr. Price was a pioneer in gynecology, so the book is gynecological in about half of its content. The chapter on vaginal hysterectomy alone is worth the price of the book, and at the Price Hospital this operation has the lowest mortality of any major surgical operation—truly a great achievment. His radical separation of adhesions in tuberculous peritonitis may not be accepted by all surgeons, but he gives much good argument to support his view. He also advocates the Murphy button for quick gastro-enterostomy. There is an excellent chapter on peritoneal drainage. In the fight over the gall bladder, Dr. Kennedy is an "otomist" rather than an "ectomist." An individualist in technic, he does not use gloves.

The text is unique in that "there is not a single quotation from previously published literature," which is an exhibition of excellent taste, because the book contains so much "that is not popular teaching," and the author, by avoiding quotations, escapes controversy. While the style in places is somewhat verbose and given over to too much preachment, the book as a whole is quite readable. As an exposition of the heterodox in some surgical subjects, and as a means of stimulating thought and comparisons of the nonodious kind, the book is a distinct contribution to the literature, and should be in the hands of every progressive surgeon.

GENIUS: SOME REVALUATIONS. By Arthur C. Jacobson. New York: Greenberg, 1926.

This little book of about 150 pages can easily be read through at one long evening sitting, and it is worth reading, because it points out the doubts that should beset the too hasty acceptance of the recently published opinions of a number of so-called scientific eugenists, that potential genius resides exclusively in the gonads of that thin cream of society known as the "Upper Class," to make its appearance only when especially fortuitous commingling of the essential chromosomes prepares the way; while the lower classes are forever doomed to the perpetuation of their own kind plus an ever increasing number of lunatics, imbeciles, criminals, and prostitutes.

With a terrific rattling of the family skeletons of many eminently respectable individuals and lineages, the author shows that genius is neither always respectable in its descent, nor respected in itself. A study of the antecedents of a large number of literary genuises (only literary geniuses are considered in the book, either because the author was familiar with them only, or lacked space in which to consider the others) showed that the germ plasm from which they sprang was composed of elements so diversified as to lead to dual personality in a few cases, and in most cases to lead to such independence of thought and action as to make almost every individual genius incompatible with the social conventions of his—or perhaps any—time, and so more or less of a vagabond, parish, or outcast.

The book is also a kind of argument against both prohibition and temperance, and something of an argument in favor of drug addiction, for the author shows by a wealth of illustrations that genius may show itself, or exercise its talents, only when its host through inebriety or opium consumption successfully benumbs the inhibitions and permits the unconscious self—the real genius that scarcely recognizes its own existence—to escape the domination of the conscious conventional self.

The opinions of the author deserve consideration, but must be taken with caution. There are other ways of looking at the problem, and of accounting for the evidence offered. The author, like many another, may be wrong in his conclusions, and is not always certain of his data. He thinks that William Pepper died of tuberculosis—we know that he died of angina pectoris!

CLINICAL APPLICATION OF SUNLIGHT AND ARTIFICIAL RADIATION. Including Their Physiological and Experimental Aspects. With Special Reference to Tuberculosis. By Edgar Mayer, M.D. The Williams & Wilkins Company. Baltimore, Md.

At present, when phototherapy is attracting universal attention through the introduction and exploitation of artificial "sunlight," a book of the scope presented by Dr. Mayer is indeed a valuable contribution. As the author states, "It is timely to determine whether or not light has earned for itself a significant place in treatment." This he proceeds to do by culling from the extensive literature on the subject, as well as summarizing the results of his own experience, extending over nine years, and dealing with the use of the mercury-quartz light in the treatment of tuberculosis.

The difficulty of evaluating the action of light in health and disease is that light constitutes a part of our natural environment to which the organism adapts itself more or less readily. While it is an essential to life processes, it is by no means indispensable, as

(Continued on page xvi.)

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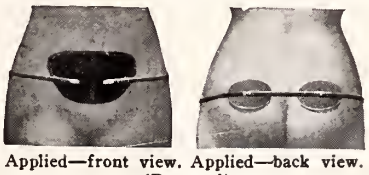
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BOOK REVIEWS

(Continued from page 402.)

shown by the fact that plants and animals can and do live for long periods without light. Thus, while certain observations quoted by the author indicate that exposure to sunlight increases the red blood count, particularly the platelets, and improves nutrition, other experimental data show that animals may be deprived of light from birth without any ill effects. That direct sunlight or its substitutes exert definite biochemical reactions there is no doubt, but here, again, the variability of the effect precludes any dogmatic statements. A great many factors enter into the process: the depth of penetration, time of exposure, susceptibility of the individual, and many other conditions as yet unknown. For instance, a marked increase of susceptibility to light results from ingestion of certain substances of the fluorescent group, such as quinin, eosin, and other coal-tar products. Certain diseases, as smallpox, pellagra, malaria, and hemorrhagic diathesis render the individual much more sensitive to light. For all we know, certain foods may have a similar effect. Obviously, it is absurd to lay down hard and fast rules on the therapeutic application of sunlight or its substitutes. Each case should be individualized, and all the factors involved taken into consideration. The physician who attempts phototherapy should make an earnest and careful study of the subject before he turns on the switch of his newly acquired sunlamps.

Some conception of the scope and value of the book may be gained by a perusal of the table of contents. To mention a few of the more important titles: The nature of radiation; some fundamental considerations on the action of light in animal and plant life; the action of light on growth and nutrition; the effect of radiant energy upon bacteria and related biological products; physiological action of light; some experimental studies; the influence of climate on solar radiation; the clinical application of solar and aërotherapy; the sources of light used in therapy; clinical studies with artificial light; dosage and technic; indications and contraindications; x-ray treatment of tuberculosis, etc.

An appendix dealing with the influence of light on biochemic reactions, an extensive bibliography, and a large number of interesting illustrations complete this up-to-date contribution to the science of phototherapy. We congratulate Dr. Mayer on his painstaking and exhaustive presentation of a subject which is destined to occupy a very important place in physiotherapy.

THE MEANING OF DISEASE, an inquiry into the field of medical philosophy. By William A. White, A.M., M.D., Baltimore: Williams & Wilkins Company, 1926. Price $3.00.

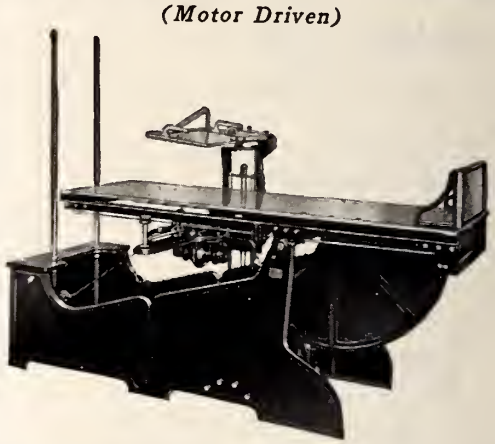
Under the above title the author presents the study of disease from a synthetic rather than an analytic viewpoint, preferring to examine it as a composite picture, frame and all. This is more interesting when one considers that the writer is a foremost psychoanalyst. He, however, writes of this phase of medical philosophy in an entertaining way. It is a plea for the better understanding of medicine in the broader sense. Being a psychiatrist he brings out many psychic parallels to somatic diseases in a way beyond the understanding of the usual medical writer.

His reference to the beneficent effects of disease is worth noting, and he says that these effects are less apt to be recognized when they occur on a different plane than the consideration of the disease. For example, he refers to the sterilizing effect of gonorrhea on the unfit, the prostitute, and the feeble-minded. He speaks of what tuberculosis meant to Trudeau, and the activities and associations that made him the great man in American medicine that he became. Mr. Beers, the founder of *Mental Hygiene*, who, as a result of his confinement for a severe psychosis, worked out

(Concluded on page xviii.)

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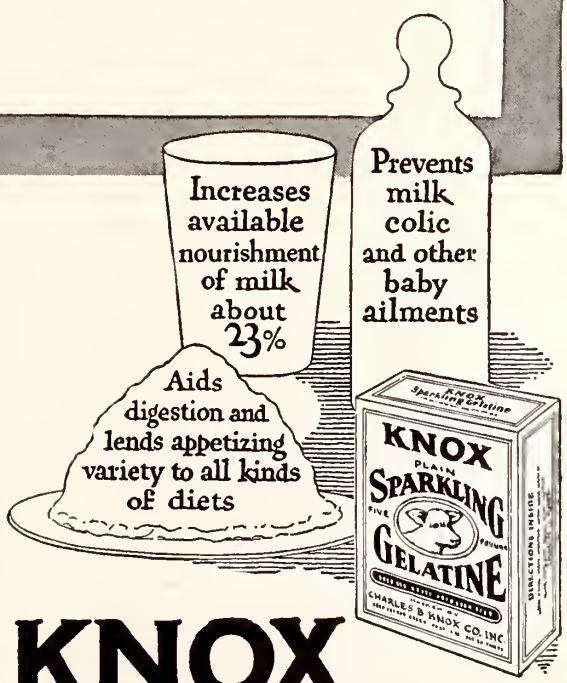
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BOOK REVIEWS

(Concluded from page xvi.)

the idea which made him such a power for good. This he cites as another example of the "forward ends" of pain.

If one is at all interested in the philosophy of medicine, this little book will afford pleasant reading. At the end of every chapter the group of ideas contained therein is summarized, and at the book's end is a general summary bringing all the loose ends together and effectively knotting them.

Something should be said in regard to the workmanship on this little volume from the Waverly Press. Its composing, typography, and binding entitle them to their motto "Sans Tache."

ANNUAL REPORT, 1926 U. S. PUBLIC HEALTH SERVICE. Government Printing Office, Treasury Department, Document No. 2976, Public Health Service. 330 pages.

This volume, which is published annually in accordance with an Act of Congress, should be in the hands of every public-health officer, for whom it will be of exceptional benefit. Epidemiologists will find much of value in the survey of conditions throughout the country, as well as in the foreign and insular health administration. Physicians will do well to read and to study especially the section devoted to scientific research. Special studies are noted on cancer, goiter, clonorchiasis, influenza, leprosy, malaria, nutritional diseases, Rocky Mountain spotted fever, occupational diseases, etc.

The entire volume should be in the possession of any individual interested in public-health administration, as the data represent the most accurate source of statistics obtainable in this country.

THE CONQUEST OF DISEASE. By Thurman B. Rice, A.M., M.D., Assistant Professor of Sanitary Science, Indiana University School of Medicine. New York: The Macmillan Company, 1927. Price, $4.50.

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BONE TUMORS*

The Essential Features of Recognition and Relief

JOSEPH COLT BLOODGOOD, M.D.
BALTIMORE, MARYLAND

To cure a benign bone tumor, with complete restoration of function, and to give the patient with a malignant bone tumor the best opportunity for a permanent cure grows more difficult as our knowledge accumulates. The element of time between the first warning and the first examination must be reduced to a minimum. Delay in recognition and treatment of the benign lesion adds to the risk of loss of function. Delay with the malignant lesion means death from metastasis to the lung.

The public must have correct information. It is not difficult to reach a small number with this valuable medical advice, but it is very difficult to reach the masses. In the first place, there is little or no difference between the warnings of three types of bone lesion:

(1) Benign, a group in which the pathologic condition spontaneously recovers without loss of function or danger to life; for example, traumatic periostitis and some forms of bone cyst and low-grade osteomyelitis, and instances of low-grade tuberculosis.

(2) Benign but pathologic processes which progressively involve and destroy more and more bone, and therefore, when repaired, either spontaneously or by treatment, there is a cure, but with loss of function. To this group belong certain types of bone cysts; practically all giant-cell tumors; many benign tumors, such as chondroma; osteomyelitis, acute and chronic, which if let alone, leads to the formation of sequestra and involucra, with and without sinus formation and joint involvement; tuberculosis, leading to caseation and joint involvement; and some forms of syphilitic periostitis and osteomyelitis.

(3) Malignant. Here the element of time is most precious.

* Read before the Section on Surgery of the Medical Society of the State of Pennsylvania, Philadelphia Session, October 12, 1926.

As the warnings of these three groups in the beginning are practically identical, the public must be educated to act toward them in an identical manner. It is a good plan, after all contusions or bruises of bones or joints, to have an x-ray made and the plate preserved. If the finding is negative, we have something for comparison should persistent symptoms indicate a second x-ray picture. Then, if bone changes are found directly after the injury, one may be convinced that at least they were there prior to it, and belong to the latent benign type. When the x-ray is taken days or weeks after the first injury, there is no positive evidence whether or not the bone changes were present before. For this reason, many latent injuries, whose existence has been revealed only by the x-ray some time afterwards, are incorrectly diagnosed. This immediate x-ray is also of importance in compensation and accident insurance. It may seem to some far-fetched advice to suggest an x-ray after a simple bruise or contusion. But my accumulated experience forces me to make this statement.

The first essential feature for the recognition and relief of a bone lesion is an x-ray. The public must be instructed in our educational efforts that the x-ray is the searchlight which reveals all diseases of bone. The next most important is the application of this diagnostic instrument of precision the moment any symptoms appear.

Education of the Public. The medical profession is just beginning to realize its new responsibility for giving the public correct information and its larger opportunity for prevention and cure of disease by so gaining the confidence of the people that they will seek medical advice either in periodic examinations or the moment any symptoms are observed. I am convinced that the increasing number of cures by amputation for sarcoma of bone since 1913, and especially since 1920, can be explained only by earlier amputation, and this result is due to an enlightened public.

How to Examine a Bone Lesion. Now that x-rays are so universally employed, many of

the profession have forgotten the importance of palpation. Since people are seeking advice so early, multiple lesions are coming under our view with positive evidence of only a single bone lesion. It would be safer in all bone lesions to x-ray the involved and the uninvolved bone, the pelvis, and the chest in every instance. The uninvolved bone gives an opportunity for comparison, and the less the change in the seat of the bone lesion, the more important is this comparison. The whole of the involved bone, with the joint surfaces, should be pictured.

Taking the pelvis and chest allows a view which will reveal multiple diseases of the skeleton, and at the same time pictures any disease within the chest. In the past two years, this routine method has made possible the discovery of many cases of Paget's disease, multiple osteomyelitis, multiple myeloma, and metastatic tumors.

The examination of the urine for Bence-Jones bodies, if positive, is very helpful. With the rarest exceptions, this positive finding indicates multiple myeloma. In the literature it is recorded as being present in metastatic carcinoma —a finding which, so far, I have been unable to confirm, nor has it been present in any of my cases of metastasis of hypernephroma.

Previous to 1920, many lesions of bone due to syphilis came under observation. The majority were recognized by the positive Wassermann with the immediate improvement after intravenous therapy. Previous to 1915 I have a number of records of periosteal bone lesions difficult to diagnose by the x-ray, in which the report on the blood Wassermann was negative, but in which the bone lesions were cured by arsphenamin. The diagnosis of lues by the profession and the routine Wassermann blood test have been so uniformly improved that now I rarely see a syphilitic bone lesion. Nevertheless, the Wassermann test should never be neglected and, in some instances, when the report is negative, it is a good rule to give at least one intravenous treatment, to check the Wassermann and note the effect on the local lesion.

Fever and leukocytosis favor osteomyelitis, and the absence of leukocytosis, with and without fever, favors sarcoma. The x-ray of the chest showing tuberculosis is evidence against malignant disease.

Palpation. At the present time this is the most neglected part of the physical examination. As a rule, the palpating finger can distinguish between the shell, expanded or not, of a central lesion, and the periosteal tumor, whether ossified or not, of the periosteal or diffuse lesion. The combination study of the picture shown by the x-ray and the sensation of touch in the fingers are far stronger diagnostic tests than either without the other. In the majority of central bone tumors nothing abnormal is felt in the soft parts outside the bone shell, unless there has been a recent fracture. The crepitation to be made out in the thin bone shell described as parchment crepitation by the older pathologists, and likened to a ping-pong ball by later pathologists, is rarely felt today, because the majority of patients do not wait for this late stage. When it is present, the older term, parchment crepitation, is employed. It is interesting to note that parchment crepitation is present chiefly in the bone cyst and rarely in the giant-cell tumor; frequently in the dentigerous cyst of the lower jaw, and rarely in any other type of central lesion of the lower jaw producing thinning and expansion of the bone shell, as the giant-cell tumor, adamantine epithelioma, fibroma, and fibrosarcoma. Any infiltration palpable outside the bone shell when the x-ray shows a central tumor, if not ossified and when there is no fracture, suggests sarcoma or myxoma. When the infiltration is ossified, the lesion is probably a central chondroma.

In rare instances of bone cysts, there may be a perforation of the shell with escape of fluid into the soft parts. This produces an inflammatory reaction which palpates like a periosteal tumor. The combination is very confusing and can be settled best at biopsy.

In all diffuse and periosteal lesions the feeling of the periosteal thickening, whether ossified or not, is a very important one. In the majority of instances one can pass the finger over the normal shaft until it strikes the first rise of the periosteal new formation. In some instances, this periosteal mass is so distinctly ossified that one can be almost certain that it is a type of new bone in a benign lesion. In other cases it is so soft that one can be quite certain that sarcoma is the only explanation. In many instances all that the finger reveals is the presence or absence of a periosteal growth. Then again, the finger easily measures the depth of this tissue outside the shaft, and the x-ray clearly pictures how much is ossified. When the palpable periosteal formation is much greater than the visible bone formation this suggests sarcoma, but it may be present in osteomyelitis.

We can exchange x-ray pictures, so that all of us may multiply our experience in their interpretation, but we cannot exchange patients; and for this reason none of us has an opportunity to secure the same experience in palpation, and I fear many neglect the rare

opportunity. Palpation can not be taught: it must be acquired by practice.

X-Ray of Central Lesions. At once we know whether it is the shaft or the epiphysis that is involved, and this is very helpful in diagnosis. Involvement of the epiphysis suggests a giant-cell tumor, while if it is the shaft and the individual is under eighteen, with the rarest exception we may conclude that the lesion is a benign bone cyst. If the patient is over eighteen, we must think of chondroma, myxoma, myeloma, or metastatic tumor. Destruction of the bone shell in a clear-cut way, as if by pressure, occurs in cases of giant-cell tumor and bone cyst. But destruction with an osteoporosis indicates a metastatic tumor. One should study carefully the shadow of the marrow cavity, cancellous bone, and cortical bone above and below the central tumor. Evident ossification of the marrow shadow is almost positive proof of osteitis fibrosa—a benign lesion. Interesting as it may be to discuss the finer differential points in the x-ray of the epiphyseal and shaft central lesions, the fact still remains that by the x-ray alone, especially in the earlier stages, the shadow of the bone cyst, the giant-cell tumor, the chondroma, the myxoma, the myxo- or chondrosarcoma, Brodie's abscess (osteomyelitis), caseous foci of tuberculosis, multiple myeloma, metastatic tumor, and the rare cysts in ostitis deformans, are difficult or impossible to differentiate. The conclusion that has the fewest exceptions is that a lesion of the shaft of a bone of an individual under eighteen is osteitis fibrosa or a bone cyst.

X-Ray of Periosteal Lesions. The x-ray will show bone formation and bone destruction. If one can make out only bone formation resting upon a normal cortical bone with no evident change in the shaft beneath, we may speak of it as an ossifying periosteal lesion. This type of lesion may be traumatic (ossifying periostitis or myositis), infectious (osteomyelitis, syphilis, tuberculosis), or neoplastic. In many cases it is impossible to distinguish between traumatic, infectious, and neoplastic ossifying periostitis. In such cases biopsy may be necessary. When one palpates a soft periosteal tumor formation and the x-ray shows a normal bone, we may have an extra-osseous tumor, benign or malignant. After a contusion of a bone there may be a hematoma or a nonossifying periostitis. In the earliest stage of osteomyelitis the x-ray of the bone may be normal, yet there will be a palpable periosteal tumor. In some cases of tuberculosis there is this soft-part periosteal tumor, but I have never seen a periosteal sarcoma without periosteal bone formation and a normal shaft. The palpable extra-osseous tumor, benign or malignant, is distinctly different on palpation from the inflammatory exudate associated with trauma, pyogenic, and tuberculous infections. Now and then, in purpura, hemophilia, Banti's disease, and grave anemias, a contusion over the bone is followed by a periosteal-tumor formation, probably largely hemorrhagic, that cannot be distinguished alone from the tumor formation of periosteal sarcoma, but the x-ray will show a normal bone. I have records of a number of such cases.

When we come to the shaft itself, we must recognize two types of diffuse pictures. On one hand there is sclerosis, where the whole bone is obliterated by a dense shadow like a cloud. Unfortunately, this may be due to sclerosing osteomyelitis as well as to sclerosing sarcoma. In osteomyelitis the marrow shadow may be less obliterated, and the sclerosing picture is present in the thickened cortical shadow and the periosteal bone formation. In sclerosing sarcoma, the marrow shadow is always obliterated. But, in some cases, only biopsy or the presence of a distinct sequestrum will allow a differential diagnosis. A sequestrum means osteomyelitis. Without the history of an operation I have never seen a sequestrum in sarcoma. Remember, in sclerosing sarcoma, there may be, as well as in sclerosing osteomyelitis, much or very little periosteal bone formation. There is always some.

In contrast to this diffuse sclerosing type, there is one of osteoporosis. Here the x-ray shows spongy or honeycombed porous bone, not unlike that seen in the ends of bone when there has been a long fixation in plaster without use of the limb. When there is an irregular area of diffuse rarefaction of the shaft of a bone, with or without periosteal bone formation, the diagnosis of sarcoma is almost certain. As a rule one can palpate a periosteal thickening, though the x-ray may show no or slight bone formation.

When there is more honeycombed destruction of the shaft of the epiphysis, with a palpable, soft periosteal mass, we know we are dealing with destructive sarcoma. But, in addition to the distinctly ossifying periosteal tumor, to the quite characteristic diffuse sclerosing or osteoporotic lesion of the shaft, there is a fourth type. Here the x-ray shows a little bone formation in the periosteal area, various degrees of bone destruction in the cortical zone, even invasion of the cancellous zone beneath, but a normal marrow shadow. As a rule, the little periosteal tumor can be felt. Such small lesions of bone may be sarcoma or osteomyelitis. When the

routine examination of more than one bone reveals two such lesions, we know it is osteomyelitis. If the lesion is single, only biopsy will distinguish it.

There is still another group. Palpation clearly reveals a periosteal tumor attached to the bone. The x-ray shows no bone-periosteal formation; the cortical bone is intact. Nevertheless, in the marrow beneath the palpable tumor, there are one or more areas than can be explained only by tumor formation. This means a periosteal sarcoma in which the tumor cells have perforated the haversian canals without producing bone destruction, and formed tumors in the marrow cavity.

I discussed and illustrated most of these groups in the *Journal of Radiology* for March, 1920, and again in recent numbers of the *Journal of Bone and Joint Surgery.*

Clinical Picture. In a few instances, in the very early stage of acute osteomyelitis, the x-ray picture may be negative, yet the patient complains of localized pain as a rule near the epiphysis on the shaft side. If the patient is a very young child, this is referred to near the joint. There is always fever and septic leukocytosis. It is wiser in such instances to cut down upon the tender area whether there is swelling or not, and in the face of a negative x-ray. The higher the fever and leukocytosis and the more pronounced the septic symptoms, the more urgent the necessity for an incision searching for a pus focus. Even when one finds pus beneath the periosteum or any extra-articular or extra-osseous focus of pus, the bone, to the cancellous tissue and marrow, should be explored. In very early cases the presence of excess of leukocytes and bacteria in the cancellous bone or marrow will be revealed only in the freshly made cover-slips. This is really the stage for operation in acute osteomyelitis. Not only will it save life, but it will save function.

Remember that when one has drained such a single focus, and whether there has been evidence of pus in a gross abscess or the organisms were found in cover-slips only, the fever may be uninfluenced for a number of days—in one of my cases, for seven days. These patients should be x-rayed and watched for tender areas in the same or other bones. In a number of instances, in spite of this continuous temperature for days, no other focus has developed. In others, one or more foci have appeared, and have been recognized by palpation or because of tenderness, periosteal infiltration, or a cloudy area in the x-ray. Each focus should be drained similar to the original, especially if fever and leukocytosis remain high or if the x-ray shows a definite focus with a less urgent temperature or blood count. In my early experience with osteomyelitis I successfully drained twenty-eight foci in the same patient, preserving both life and function.

This clinical picture of osteomyelitis has never been properly described, and many surgeons throughout the country are not certain as to the indications. A focus of osteomyelitis is as urgent as acute appendicitis, but unfortunately, in osteomyelitis, the successful drainage of one focus does not necessarily check the disease as it does in appendicitis. Since the advent of the x-rays, we are tremendously helped, because often, with an apparently subsiding fever and leukocytosis, the infectious process is proceeding up the shaft. The x-ray will allow one to recognize this. Now and then it may be necessary to drain the entire marrow canal or even subperiosteally remove the entire shaft. The splendid studies of Nichols of Boston on this point should be reviewed and revived in recent literature.

In very young children, because of joint symptoms and the presence of bacteria in the joint exudate, the operator may be content with drainage of the joint only, overlooking the focus of osteomyelitis in the bone, just as in the past many not correctly informed surgeons have been content with draining an extra-osseous abscess, neglecting the primary intra-osseous focus.

The clinical picture of acute osteomyelitis, single or multiple, is so distinct that the diagnosis can be made without the aid of x-rays, and should never be confused with any other disease of the bone. But osteomyelitis may be a latent process, and the pathologic processes may go on with and without pus formation and be associated with periosteal bone formation, involucrum, and areas of granulation tissue giving areas of bone destruction, so that the clinical and x-ray picture cannot be distinguished from sarcoma, except by biopsy. If one can see in the x-ray plate a sequestrum, this rules out sarcoma. If, on exploration, one finds pus or organisms, this too rules out sarcoma. But there is a form of osteomyelitis known in the literature as Garré's nonsuppurating sclerosing osteomyelitis, and a form described by me as infectious ossifying osteomyelitis, in which the organisms cannot be found in cover-slips and cultures, and in which there is no pus, no sequestrum, and no granulation tissue, except of the fibrous type. Only a most careful biopsy will differentiate. I have described such a case in the *Journal of Bone and Joint Surgery.*

Tuberculosis has a pretty definite clinical pic-

ture; chronicity and joint symptoms are the characteristic features. In all forms of bone tumors joint symptoms are late. Up to 1900 there were five cases of sarcoma of the shaft invading joints which were diagnosed clinically as tuberculosis until explored. Since 1900 I have not encountered such a case in my own records, and only once in a great while in correspondence. In a few instances the tuberculous destruction of the epiphysis may be single, and resemble a giant-cell tumor of the epiphysis or a bone cyst. Still rarer are the caseation foci in the shaft which cannot be distinguished from the other possible central lesions. As a rule, tuberculosis, except in the vertebræ, can easily be distinguished by the multiplicity of the lesion in the epiphyses and the joint involvement.

The differential diagnosis of lesions of the vertebræ cannot be considered here.

When the patient is an adult and the lesion is central in the shaft, always bear in mind multiple myeloma and metastatic tumor. The presence, established by palpation and the x-ray, of multiple lesions of the scalp is against a primary sarcoma.

Bowing of the shaft in an adult bone is almost pathognomonic of Paget's disease, although it may be observed in other diseases of the skeleton in adults. It is most commonly present in the tibia. Bowing may take place in diffuse osteitis fibrosa (bone cyst) in the shaft of a child.

With these exceptions, the x-ray is the most important feature in the differential diagnosis of chronic lesions of bone, and with the aid of other laboratory tests and palpation a workable diagnosis is usually possible.

For a short paper, enough has been said on the essential features of recognition, except biopsy.

Biopsy. When one is of the opinion that amputation or resection offers more hope for a cure than radiation, then biopsy must be done for all lesions of the lower extremity below the middle third of the femur and all lesions of the upper extremity including the scapula, if resection is possible. The results of my recorded cases show that the only cures of sarcoma of bone have followed amputation in those cases in which the lesion was situated in the lower third of the femur. There are no cures after amputation for similar tumors of the upper extremity. For this reason, in all operable lesions there must be a biopsy before amputation or resection if the condition cannot be positively diagnosed by x-ray. This is the subject of my address published in the *Southern Medical Journal* for January, 1927.

In brief, in those clinics in which the pathologist is not prepared to make the diagnosis from an immediate frozen section, it would be wiser to submit the x-ray picture to a few other authorities before making the exploration. The exploration should always be made with the cautery—the knife blade of an electric cautery. If bone must be chiseled, one can use a piece of gauze saturated with a fifty-per-cent solution of zinc chlorid, and well wrung out, for chemical cauterization. This is less dangerous than carbolic acid and alcohol with the cautery. In some instances, it is necessary only to find the periosteal tumor. In diffuse lesions of the shaft it is best to explore the marrow cavity. In all central tumors, one must go through the bone shell. The object of the cautery and the zinc-chlorid gauze is to destroy tumor cells, to prevent possible local implantation in the exposed fresh tissue, or the even more remote possibility of the cells entering vessels and metastasizing. If for any reason the diagnosis cannot be made at this operation, only enough tissue for diagnosis should be removed. The whole wound should be again cauterized and packed, either with an alcohol sponge, or one saturated with fifty-per-cent zinc chlorid and well wrung out. The skin can be closed over this gauze. The tissue can then be studied and the diagnosis should be made within five days. If one is to wait five days or more, use an alcohol sponge; if less, the zinc chlorid.

It is very essential for all interested in bone lesions to study the details of biopsy, because at the present time we do not know its real dangers, and there may be some exaggeration of them. Nor do we know a method which will absolutely protect from all danger. On this point there must be agreement. If resection and amputation are the methods of choice in the treatment, and the x-ray cannot make the positive diagnosis, biopsy must be done. Theoretically, the safest biopsy is one in which the diagnosis is made and the indicated operation follows immediately. But unfortunately, even in the most experienced hands, the microscopic differential diagnosis between certain forms of benign and malignant lesions is difficult, and there may have to be an interval of time between the diagnostic incision and the therapy. For the present it seems safer to employ this thermal and chemical cauterization. The chances of curing malignant disease by resection or amputation are too small to justify the mutilating operation without clear evidence of malignancy.

The Essential Features of Relief. In acute

osteomyelitis, incision and drainage; in tuberculosis, absolute rest and other hygienic measures. When the age of the patient is under eighteen and the site of the lesion in the shaft allows a positive conclusion of a bone cyst, there can be delay. If there is a fracture, treat the lesion as a fracture. In the majority of instances, ossification and a permanent cure follow. I have only one example of nonunion and only a very few (less than 5 per cent) of nonossification, in 250 cases. When the x-ray shows no ossification and further expansion, operate. The chief object of the operation, unless the cyst is a very small one, is fracture, or filling the cavity with bone chips or a bone transplant. If the cyst contains a connective-tissue lining, or is solidly filled with this leathery connective tissue, remove it. Remember that some cysts have no lining and contain only fluid. Some cysts are polycystic, and if there is an operation, every cyst must be opened, or the area must be resected subperiosteally. This answers well for small bones. Very large cysts should be opened, drained, and curetted. Never try subperiosteal resection of large cysts: it is too dangerous because of hemorrhage. The failure to cure the bone cyst is due to the failure at operation to make, if necessary, a comminuted fracture, or to overlook multiplicity of the cystic disease.

When one explores a central tumor with an intact bone shell in the epiphysis or the shaft, one is justified in trying curetting with thermal and chemical cauterization. In my hands it has always been successful in the giant-cell tumor and the chondroma, and in one example of pure myxoma. Up to the present time I have not had an example of a five-year cure of a central sarcoma or myxoma. They are rare. The sarcomas are always of chondromyxosarcoma type, and readily to be distinguished from the giant-cell tumor. Should I meet a myxoma or a sarcoma in exploring a central tumor, I should be inclined to resect or amputate. But I must confess I have no cures to justify this procedure. A more important advice is this: When you expose a giant-cell tumor and your pathologist informs you that it is the malignant type of the giant-cell tumor, still treat it by curetting. I have covered this point in previous communications, and am again preparing a new argument. There is no space here for this discussion, but nothing is gained by resection or amputation when the diagnosis is a malignant giant-cell sarcoma, because if it is a sarcoma there is no cure; if it is not, resection and amputation are unnecessary, except in those cases of small bones in which resection with and without bone transplantation gives as good a functional result as amputation.

In metastatic central lesions of bone, with a good bone shell, some comfort may be given by curetting. When the bone shell indicates resection and bone transplantation, there are a few cases in which the function of the limb has been maintained for the time the patient had to live.

When the biopsy shows a clear-cut periosteal or diffuse sarcoma of the upper extremity, resect. If the x-ray shows that resection is impossible, do not explore, but radiate. I am now publishing in *Radiology* the meager results of radiation. If the lesion is in the lower extremity below the middle third of the femur, amputate; if above, and resection is not feasible, radiate.

Space prevents further discussion of the details of relief. In my previous articles already referred to, one will find the therapy discussed in detail, and in a new series now appearing in the *Journal of Bone and Joint Surgery* the essential features of therapy are rediscussed, based upon restudy, especially the increasing number of cures after amputation of the lower extremity since 1920 and the increasing number of possible resections in the upper extremity, the increasing number and permanency of the cures with unimpaired function in the giant-cell tumor after curetting, and the newer data based upon the study of the bone cysts which have not been arrested by operation.

Radiation and the Giant-Cell Tumor. There is no evidence that it is harmful to try radiation in all central lesions—epiphyseal and diaphyseal, or other bones of the skeleton of the adult—and a great many cases of giant-cell tumor are being subjected to good radiation and in many cases with apparently good functional results. But the time is too short for comparison as to permanent results. There is no evidence that radiation will help in chondroma, myxoma, or central chondromyxosarcoma, nor in multiple myeloma, nor metastatic hypernephroma. It has given temporary relief in some cases of multiple carcinoma.

904 North Charles Street.

To the propaganda for the prevention of cancer in which early consultation with a physician for symptoms referable to the breast, the stomach, the rectum, and the uterus, in particular, is urged, there might well be added an urgent word as to the importance of an immediate consultation in cases of continued or repeated attacks of spasmodic coughing, regurgitation of food, a "lump in the throat," or any difficulty in the passage of food through the esophagus.—*Wisconsin Medical Journal.*

A COMPARISON OF THE CLINICAL DIAGNOSIS OF PNEUMONIA IN INFANTS AND CHILDREN WITH THE RESULTS OF X-RAY EXAMINATION AND WITH THE FINDINGS AT AUTOPSY*

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Some of the older physicians have criticized the present state of medical education as tending to produce laboratory doctors who are trained to make a diagnosis only when the results of more or less complicated laboratory analyses are before them, to the detriment of the development of their clinical ability. It is safe to assert that the influence of the x-ray laboratory is, in general, quite the opposite, for the fact that his clinical study is going to be reviewed in a graphic way and his methods and results either confirmed or discredited, is apt to make any physician become more and more accurate, careful, and thorough in the study of his patients.

An occasional glance backward is of value in order to determine whether any progress is being made. And so, having had for some time the facilities of a well-equipped x-ray laboratory in the Children's Hospital, it has been thought worth while to try to estimate the extent to which we have been helped by this department in the diagnosis of pneumonia. At the start, it is well to call attention to the fact that pneumonia is probably more easily recognized in infants and children than in adults, because of the thinner chest walls and the relatively greater respiratory excursion. It is natural, therefore, to expect closer harmony in our investigation than would be found in a hospital for adults. On the other hand, this is sometimes counterbalanced by the very limited extent of the consolidated area in children,

We have analyzed the findings in 100 cases of pneumonia occurring in our service, 91 of which were treated from December 1, 1925, to July 1, 1926, the records of 9 consecutive cases from January, 1925, being used to fill out the number. The reports from the x-ray laboratory confirmed our diagnosis in 80 cases. They confirmed the diagnosis in 5 others, and added a second area of consolidation that had not been found by any of the clinicians. The reports were negative in 15.

At this point it must be stated in the interests of fairness that the value of the roentgen-ray examination is greater than would appear from the above figures. Our method is as follows: The patient is first seen by the admitting officer, who is usually the chief resident physician. He elicits the family and personal history as fully as possible, which he writes on the chart, together with notes on the temperature, pulse, and respiration. He makes a thorough physical examination and records a provisional diagnosis. The patient is then taken to the ward, where the resident physician makes another thorough physical examination, writing the notes as fully as possible. Within the next 24 hours the patient is examined by the assistant physician and the visiting physician, and if there is any new finding, record is made of it. The x-ray picture usually is made on the second or third day, and again later, as often as the course seems to indicate. It goes without saying that the four clinicians are not always in harmony in their interpretations of the physical signs in spite of earnest conference, and here is where the x-rays show one of their great values, acting as a superior court in confirming one or the other opinion. But in our analysis we have looked on the x-rays as confirming the diagnosis, when perhaps only one of the examiners has given the location of the consolidation shown on the film.

The 15 negative reports were made the subject of a conference with the roentgenologist at which the physical findings were discussed and the films studied again, with the result that shadows were found in 3 that could explain the signs; so there remain only 12 in which the clinical diagnosis was not confirmed by the x-rays.

In 5 of these 12 cases we were undoubtedly wrong in locating the lesion. Thus in one, three of us could find no consolidation, one found signs at the left apex and right base, while the x-rays showed a distinct area of consolidation in the lower part of the right upper lobe. In the second we all agreed on both bases, the film showing only an area of density at the right hilum. In the third we found only the right base involved, but the roentgenologist reported "dense mottled and flakelike infiltration in each lung typical of disseminated tuberculosis, and marked hilum involvement on each side, possibly due to bronchopneumonia." The patient had moderate leukocytosis, rapid respiration, and fever, becoming normal on the second day, after which the lungs cleared and recovery was uneventful.

To digress a moment, I would say that this was probably not a bronchopneumonia but a croupous pneumonia with multiple small foci of widespread distribution. It is my belief that pneumonia in infants and children is more frequently croupous (but not necessarily lobar in distribution) than it is catarrhal or bronchopneumonia.

* Presented before the Section on Pediatrics of the Medical Society of the State of Pennsylvania, October 12, 1926, at a clinic held at the Children's Hospital, Philadelphia, Pa.

I received this impression some years ago at the autopsy table and in the pathologic laboratory, and my clinical experience has confirmed it, the usual course of pneumonia in infants and children being with leukocytosis, rapid respirations, more or less marked fever, usually continuous but sometimes intermittent, lasting two or three to ten or twelve days, and ending abruptly.

To resume discussion of the disagreements, in the fourth case we thought the right lower lobe was affected, the x-ray showing consolidation of the right upper lobe. In the fifth case we were unable to make the diagnosis. The heart was pushed well over into the right chest, but the signs on the left did not indicate effusion into the pleural cavity, being more like a bronchopneumonia. The x-ray picture apparently showed a pneumothorax, and we drew off a large amount of air, after which the heart came back somewhat. However, appeal was carried to the supreme court, the autopsy table, which ruled that both of us were wrong. The condition was a tuberculous cavity occupying nearly the whole of the left upper lobe, and as it had the unusual property of acting like a pneumothorax in displacing the heart, we concluded that there must be a valvelike condition in a bronchus permitting air to enter the cavity, but not allowing it to pass out.

There remain, then, 7 cases in which we thought pneumonia existed, the films failing to show it. To explain these cases we may draw the following conclusions: First, our clinical diagnosis may have been in error; second, some of the cases may have had consolidation concealed by the heart shadow, which a profile view might have shown, as pointed out by Dr. Charles Hendee Smith; third, the lesions which we found might have been so small and located in the center of the lung that they could not cast a shadow through the air-filled lung around them. This is entirely possible, for, as was mentioned above, one difficulty in diagnosing penumonia in infants, perhaps the great difficulty, arises from the very small area of consolidation in some cases, an area to which the general symptoms of fever, rapid pulse and respiration, and nervous phenomena may be out of all proportion. In the detection of these small areas it has always seemed to me that observation of the intensity of the vocal resonance furnishes the greatest help. Percussion is notoriously inefficient. Bronchial breathing may not be audible through the overlying lung; in fact, the breath sounds may be clearly bronchovesicular. But if the child is conveniently crying during the examination and the whole chest is gone over carefully, noting the intensity of the vocal resonance, then if suddenly a small area is found in which it is increased many times, I have no hesitation in basing a diagnosis of consolidation on that sign, and frequently find that confirmation is given by the x-ray picture.

ABSTRACT OF DISCUSSION

J. Claxton Gittings, M.D. (Philadelphia, Pa.): I should like to ask Dr. Bromer whether any consideration is taken of the relative positions of the right middle and lower lobes. It must be extremely difficult to differentiate in an anteroposterior view between involvement of the upper part of the right lower lobe and the middle lobe since the former lies directly back of the latter.

Ralph S. Bromer, M.D. (Philadelphia, Pa.): In reply to Dr. Gittings, it is impossible to tell from an anteroposterior view whether the middle lobe or the lower portion of the upper lobe is involved. A lateral view is necessary. In one of our cases the clinical diagnosis was definite involvement of the right base, while the x-ray showed the middle portion of the right lung to be involved. The point in this paper was to show discrepancies between clinical diagnosis and x-ray findings. So long as the difference is marked, there is no necessity for discriminating between the middle lobe and lower portion of the upper.

CANCER OF THE LOWER PORTION OF THE LARGE BOWEL*

Based on a Study of Nine Cases

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In selecting the above title for this paper, I am mindful of the unusual facilities for a proper study of the subject placed at my disposal through the kindness of my preceptor and chief. During my surgical residency I have been in actual contact at the operating table and bedside with nine cases—a number which compare favorably with almost any of the large general surgical clinics in the country. Nor is it with this thought alone that I dare write upon a subject so anatomically intricate or so surgically complex as that which I select; rather is it because the ravages of this disease in both young and old, male and female, indescribably horrible as it at first seems, can be combated successfully by early radical surgery properly selected, and some hope can be offered to those unfortunate victims who are looked upon as incurable and condemned to palliative treatment only, even by some competent surgeons who, either fearing the shock of the operation or unacquainted with its results, hesitate at its performance.

Of the nine cases of carcinoma upon which this paper is based, three had radical surgery in the form of the two-stage operation of Jones, and made good operative recoveries. Another

*From the surgical service of Dr. John H. Jopson, Hospitals of the Graduate School of Medicine, University of Pennsylvania, Philadelphia.



Fig. 1. Showing an extensive growth in a patient, aged 25, who made a good operative recovery following the two-stage operation of Jones.

case having the same operation died following gangrene of the lower loop of the colostomy. Another had a resection of the rectum with establishment of a sacral anus, and is at this time living and well. The remaining four patients with advanced carcinoma were unsuited to radical surgery, and palliative colostomies were done upon them.

Past experience has taught the profession that within the five-year period following operation for cancer in other portions of the body a reported cure is questionable. Indeed, some writers will not accept anything under eight years as a cure. The time of my residency does not lend itself to an end-result report, but this preliminary report is made with the knowledge that the final results will find an outlet in due time, and that the immediate or operative results are pleasing. An operative mortality of 20 per cent is, indeed, not discouraging when compared with some of the earlier results. Rottler's mortality in twenty-four cases was 44 per cent. Hochenegg lost three out of five patients from the combined operation. Mayo's mortality in nineteen cases when Quenu's operation was used was 26.3 per cent. Those interested in this subject will do well to read the earlier papers of Peterson and Hartwell and the more recent papers of Miles, Coffey, and Pfeiffer.

Symptoms

The symptoms are varied and indefinite, and either because of modesty on the part of the patient or because he ascribes the symptoms to other rectal disorders, such as hemorrhoids or fissure, which he believes to be not serious, it often leads to delay. Indeed, even the practitioner and sometimes even the surgeons are misled. One thing must always be remembered—that constitutional disturbance is not a marked feature of the disease. Buie, of the Mayo Clinic, in a recent study of a large group of cases, places the order of the symptoms as follows: melena, pain, constipation, diarrhea. In our series of nine cases, melena was present in all and was the only symptom in one of the nine. It was the first symptom in one of the nine. Constipation was present in six of the nine patients, and was the first symptom in five of the six. Diarrhea was present in two of the patients, and was the first symptom present in one of the two. Pain and discomfort were present in seven of the patients, and was the first symptom in one of the seven. Other symptoms, such as loss of weight and deformed stools, are helpful in establishing a diagnosis. Age, we believe, is of little help. In our nine cases the average age was forty-eight years. The youngest was twenty-five and the oldest sixty-five. Two were between thirty and forty, two between forty and fifty, and three between fifty and sixty. Five were males and four females. Only one presented a family history of cancer. It is well here to cite a few interesting figures from Mumford. Cancer of the rectum causes 0.3 per cent of all deaths. It is twice as common in men as in women. It is seen most frequently after forty, but patients as young as twenty-three are reported, and it has even been reported in a child under ten years of age.



Fig. 2. The rosebud colostomy in the patient shown in figure 1.



Fig. 3. The final result in the patient shown in figures 1 and 2, obtained after complete Dakinization of the cavity following resection of the bowel, including the growth.

Diagnosis

Digital examination will almost always establish a diagnosis, and should always be followed by proctoscopic examination and barium-enemata study preceded by plate study for bone metastasis.

Treatment by Radical Measures

It is here appropriate to discuss the mode of spread of rectal cancer. Pfeiffer, quoting from Miles, states that it is spread (1) by the blood stream, (2) by contiguity, and (3) by the lymphatics; that when blood-stream spread has occurred, it removes the case from the possibility of operative cure. Spread by contiguity is relatively slow, requiring about a year for a growth to become immovably fixed to the surrounding pelvic structures by immediate extension. On the other hand, extension by the lymphatics or by permeation, as Handley conceives it, occurs with considerable rapidity. It is to meet this type of metastasis that surgery is planned. He further states that there are three zones of spread; namely, downward, lateral, and upward. The intramural lymphatics of the bowel pass radially through the coats on their way to the periphery to discharge into the marginal sinus of the mesentery. Hence it happens that extension upward or downward within the walls of the bowel itself is slight, and a margin of two or three inches above the growth and rather less below is usually sufficient to meet the requirements. The ideal operation removes in the zone of upward spread not only the segment of bowel containing the growth, but also the enveloping mass of tissues down to the pelvic floor, if the growth be high; if low, the muscular floor itself and the ischiorectal tissues. In the zone of lateral spread, the lines of cleavage will be the sacrum, posteriorly; the pelvic walls, laterally; and the bladder or vagina, anteriorly. The ureters, of course, must be separated and preserved.



Fig. 4. This patient was a male, aged 31, with a very rapid-growing adenocarcinoma. The case was extremely interesting in that the entire lower loop of bowel became gangrenous and sloughed away, leaving a sinus extending from the colostomy opening to the pelvic opening below. Daily irrigations of this sinus with normal saline solution were employed, the wound being Dakinized from below. A good operative recovery resulted.



Fig. 5. The same patient as figure 4, showing the living upper loop of bowel with the tube *in situ* through which normal saline solution was administered. It is problematic here whether, with the entire lower loop gone, the danger of recurrence is less likely, although his convalescence was, indeed, very stormy. One other of our patients died following gangrene of the lower loop.

Before attempting surgery, a complete study of the case is made, all laboratory data are collected, and the patient is typed and a suitable blood donor is obtained. The patient is prepared for from one to two weeks before operation, receiving, in addition to strengthening diet, laxatives and the daily irrigations of the bowel with saline solution. The bladder is emptied immediately before operation, and through a left-



Fig. 6. The rosebud colostomy established by means of the trap-door flap.

rectus incision the abdomen is opened and its contents examined. Where the growth has involved the walls of the pelvis or bladder, or has given rise to metastasis deposits in the liver, the thought of radical surgery is at once abandoned and simply a palliative colostomy done and the patient referred to the roentgenologist for deep therapy. In the absence of the above, and where the growth is freely movable or involves only the adjacent lymphatics and where there is no complete obstruction, radical surgery in the form of the two-stage operation of Jones is done.

In the first stage, the pelvic colon together with its mesentery are separated as far upward as the promontory of the sacrum. The superior hemorrhoidal is sacrificed one inch below the promontory at Sudeck's critical point. The mesentery is cut at right angles to the axis of the bowel. In order to avoid damaging the straight arterial branches which are derived from the marginal artery of Drummond until this artery is itself divided, after freeing the bowel, it is restored down in the pelvis beneath its new pelvic floor. A loop is drawn out, and with a trap-door beneath, a colostomy is established and the patient returned to his bed. The loop of protruding gut is opened at the end of a week or, in the presence of distention, earlier.



Fig. 7. Showing the mode of Dakinization in the same case as figure 6.

After two weeks, when the patient has fully recovered from the effects of the primary operation, the second stage is planned. With the patient in the lithotomy position, the anus is sutured shut with a circular stitch of silk, having first packed the cleansed rectum with gauze. In the male, a sound is placed in the urethra and held in position during the operation. With a straight perineal incision, the rectum is dissected well away from its attachments, and when the



Fig. 8. Showing the excellent results obtained by Dakinization and the almost complete healing of the perineal incision.

area well above the growth is reached, this portion is closed and severed by means of the actual cautery. The resulting cavity is packed with gauze which remains for forty-eight hours. At the end of this time the gauze is removed and Dakinization of the wound is commenced. There is always considerable shock attending this stage, and the patient must be carefully watched and conditions met as they arise.

For anatomic reasons, the first stage of the operation is more difficult in the female, while the second stage is more difficult in the male. Important considerations are the strict asepsis maintained by the intra-abdominal method, which provides a more thorough removal of the growth while the bowel is more efficiently drained and suitable nourishment given up to the time of final operation. Septic absorption is diminished, and the induration of the perineum decreases between the stages.

While most writers are of the belief that x-ray and deep therapy are almost useless, it is routine on our service, as soon as the patient has regained his strength and his blood picture permits, to refer him to the x-ray service for deep therapy.

Space here does not permit of detailed case reports, but illustrations from some of the cases are shown herewith.

Locust Mountain State Hospital.

Symposium on Cardiac Decompensation *

CAUSES OF CARDIAC DECOMPENSATION

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The subject of cardiac decompensation is an extremely interesting and important one to the medical practitioner. It seems to me, however, that there is, at times, in the medical profession misunderstanding of the meaning of this term. If the heart, as a result of disease or of unusual strain, is required to do a greater amount of work than usual, it makes an attempt to become equal to the increased demand. Commonly, as a result of this extra effort, the heart becomes enlarged, this enlargement being partly hypertrophic and partly dilatation. The individual is not conscious of the change which has taken place, and it is discovered only in the course of a careful examination. If, at this point, the heart is unable to perform the work required, the patient becomes aware of the fact that he is unable to exert himself as before. He is conscious of unusual sensations, and finds that his range of activity is somewhat curtailed. In the first instance, the changes have taken place without attracting the attention of the individual, and he performs his usual duties without extra effort. In this case the heart is said to have compensated. In the second instance, when increased labor is no longer possible, the individual's attention is attracted by his decreasing ability to work. Then the circulation, and especially the heart, may be said to have failed, and this condition is spoken of as circulatory, or cardiac, failure.

It must be admitted that the circulation may, at times, in serious cases, fail before the heart has had an opportunity to bring about compensation. As has been well said in a recent article by Alfred R. Cohn, "It must be clear that what comes to the individual's attention is not compensation but failure. It must also be clear that what the physician estimates for the purpose of prognosis is not failure, but compensation, that is to say, the amount of work the altered heart may be expected to perform."

The usual symptoms that accompany decompensation may be said to be pain, edema, or shortness of breath. Any one or all of these symptoms may be present, but as already said, there is frequently a lack of clearness in the use of these terms. Occasionally one reads of a person whose heart is said to be compensated, but who nevertheless has pain, shortness of breath, or perchance edema. With any of these symptoms present which are clearly referable to the heart, surely there could not have been a state of compensation. A certain amount of failure has taken place in each one. As Dr. Cohn well says, "There is only one heart which can be said to be compensated and that is the heart which does not give rise to complaints by the patient and does not, at the level, at which he leads life, involve him in a limitation of his habitual activity."

The causes of decompensation may be divided into two classes. The primary causes are those which produced the first elements of cardiac disease in the individual. These are so well known as hardly to need enumeration. It is perhaps well, however, to mention a few of the chief ones.

Acute rheumatic fever, which so frequently and commonly produces damage to the endocardium, formerly, in fact, thought to be the most common cause of organic heart disease, still holds a prominent place as a cause. Dr. Cohn says the causal rate has fallen from 45.0 per cent to 10.9 per cent. It must not be forgotten that in children, even so-called growing pains, which are no doubt myalgic or myositic in character, may be overlooked even by parents and may be the cause of the endocardial inflammation.

Diphtheria, which so often poisons the entire system, including the heart muscle, and causes a myocardial weakening, is quick in showing disastrous effects on the circulation.

Syphilis has long been known to be the cause of a variety of cardiovascular diseases by the development of gummata or of diffuse inflammation in the heart and the vessels. The importance of this disease as a cause has risen in twelve years from 36.6 per cent to 74.7 per cent. The circulatory system may be involved in the secondary and more often in the tertiary stage of this disease. How long after the initial lesion the cardiac or vascular symptoms may appear varies

* Read before the General Meeting of the Medical Society of the State of Pennsylvania, Philadelphia Session, October 13, 1926.

greatly. I have, myself, known of a case where the symptoms were apparently delayed over twenty years.

Focal infection in any part of the anatomy, notably the teeth, tonsils, sinuses, gall bladder, appendix, prostate gland, and seminal vesicles or ovary may readily produce organic cardiac trouble.

Long-continued intestinal indigestion may at times produce a toxemia which may seriously damage one or more of the cardiac valves.

Arterial hypertension and renal disease must also be mentioned as frequent and serious causes of cardiac disease.

Some authorities assert that focal necroses in the heart have been found after attacks of typhoid fever. Such necroses might and no doubt do lead to cardiac impairment in later life.

Almost all the so-called children's diseases have at various times been spoken of as causes of heart disease, but little, I think, has been really proved in this line. Scarlet fever, by producing an attack of nephritis, certainly may produce secondarily a cardiac weakening. Any of these primary causes may produce damage in the heart which will be the underlying cause of the future decompensation.

It is hardly necessary to outline the course of cardiac disease before the final development of decompensation. The heart may go on for months or even many years with a faulty valve and weakened muscle structure, or even irregular action, and unless some secondary cause intervenes, the patient may live in comparative comfort. Given a heart which has been damaged by previous infectious disease, a final cause is frequently needed to produce cardiac decompensation. Frequently these final causes are noninfectious in character. Emphysema, for instance, not infrequently causes cardiac failure, the symptoms of a venous stasis being the first to show themselves.

Disease or narrowing of the coronary arteries causes loss of nutrition of the cardiac muscle. Of course, this condition may exist in the individual for a long time, but on the other hand it may lead to rapid changes in the muscle structure and consequently rapid development of cardiac decompensation.

Hypertension continuing for a considerable length of time frequently causes decompensation, because the heart, laboring to carry on its work on account of increased obstruction, finally gives way under the strain, and the individual finds himself becoming short of breath at a time of unusual exertion, or even in the ordinary performance of his duties.

Hypertrophy of the cardiac muscle may, of course, be congenital in origin, but whether congenital or acquired, this condition frequently leads to decompensation.

A condition of arterial hypertension is often present in women at or about the time of the menopause, and these cases at times suffer with attacks of precordial pain and other symptoms of cardiac failure.

Several of the more serious infectious diseases may produce cardiac decompensation indirectly by first causing a general toxemia. Lobar pneumonia is well known frequently to cause acute cardiac dilatation because of the extra strain which is placed on the right heart in this disease. Perhaps I may add that any form of pneumonia may, and I believe does, at times cause decompensation by first producing a general toxemia.

In the late stages of anemia, cardiac failure frequently occurs. The same may be said of the late stages of the cachexia of cancerous disease. Graves' disease is another frequent cause, probably due to the intoxication from the hyperthyroidism.

The exciting cause of the attack may be some unusual physical exertion, such as climbing a hill or a long flight of stairs, or perhaps the lifting of some heavy object, or some other unusual exertion. Quite frequently some indiscretion in diet, such as overeating, or the eating of some indigestible article, may bring on decompensation. Many cases of this sort may explain the common statement that death was caused by acute indigestion. Frequently the attack does not come on immediately after the exciting cause but perhaps several hours later, and frequently in the early morning when the cause had existed the night or day previous.

Finally, various industries and occupations may be causal factors. These may be due to unhealthy conditions or surroundings, such as the inhalation of noxious fumes, or they may be due to the unusual exertion required in some occupations, or to the stress of nervous energy demanded.

SYMPTOMATOLOGY OF CARDIAC DECOMPENSATION

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The problem of heart disease, even if imaginary in the majority of cases, as stated by Cabot, has assumed widespread economic and social importance, probably due in a large measure to the knowledge gained from periodic health examinations, from a careful examination of industrial workers, from the large number of damaged hearts found in school children, and especially from a study of the reports given out

by expert cardiologists who passed upon the fitness for duty of so many of our young men entering the Army during the World War.

With this information available, greater progress may be expected in the future relative to cardiac conservation, providing physicians assume their responsibility toward their patients, which they undoubtedly will, in the light of the high ideals of the profession, and the lofty professional spirit and pride which animates its members, whether they be research men of the laboratory or stationed at the practical end of the line.

It has been stated, doubtless quite correctly, that at least two per cent of the population is suffering from some form of serious cardiac derangement, that one eighth of all deaths are caused by heart disease, and that more people in New York City die from heart disease than from tuberculosis. If the above statements are true, undoubtedly we will all agree that it is about time we squarely face the problem confronting us and study more carefully the etiology and symptomatology of cardiac impairment.

The earliest manifestations of cardiac decompensation, subjective or objective, should be most accurately obtained, for, as Mackenzie strongly emphasized, they are the first and probably most important symptoms and signs of cardiac protest. The physical findings in early heart embarrassment may be and usually are slight or negative, but careful inquiry may elicit subjective phenomena of value, such as heart consciousness, mild distress in the epigastrium, shortness of breath at night, indefinite sensations of oppression in the cardiac area, definite limitations as to physical exertion, cough suggestive of bronchitis, but of course due to pulmonary congestion.

The clinical picture presents itself in various forms, depending upon the intensity and duration of the above symptoms, which probably have developed quite gradually. Patients rarely complain in the same manner, and especially noteworthy in beginning myocardial weakness is breathlessness upon accustomed effort. Another patient speaks of palpitation, while others show apathy or restlessness. Some stress a constriction or oppression in the chest after slight exertion, others transient attacks of faintness or dizziness. Many complain of or describe quite accurately digestive disturbances, and refer entirely to the stomach. A slight pain occurs occasionally beneath the sternum which produces a feeling of anxiety in the patient, and really may be suggestive of a beginning angina. This pain, if located beneath the sternum or in the upper abdomen, with moderate rigidity of the abdominal muscles, should warrant an earnest search for the cause, or a wrong interpretation of its character will be the consequence. Pain due to myocardial change is considered as an expression of the exhaustion of the heart muscle, and the nature and extent of that impairment is determined to some degree by the severity of the pain.

When, as before stated, patients realize that they have some quite definite limitation as to physical exercise, when they complain of a sense of fullness referable to the stomach, belching of gas, an indefinite sensation in the region of the heart or in the right hypochondrium, do not make the fatal error of attributing these symptoms to digestive disturbances alone, do not think of catarrah of the stomach, ulcer, cancer, etc., but study the cardiovascular system before recording your impression of the case. Tenderness in the epigastrium is often present, but it is just as likely to be due to a congested liver, secondary to a cardiac condition, as it is to any pathology in the stomach. Examination will also likely reveal some moisture at the base of the right lung which cannot be explained except by a beginning myocardial weakness. The above symptoms, although many of them may be quite indefinite, certainly are suggestive of myocardial change.

Under normal conditions the average number of heart beats for adults should range from seventy-two to eighty per minute, and in all early cases of beginning heart decompensation, patients, at some of their examinations, complain of subjective sensations of palpitation. This tachycardia of which they are conscious is pathologic at least in that it departs from the normal, and should be studied most assiduously to determine to which group it should be assigned. Are we dealing with a simple paroxysmal tachycardia caused by increased impulse formation at the normal site of origin, or is this rapid contraction wave of the heart originating in some abnormal site determining the mode of action of the auricles, the explanation of which cannot be positively assured without the use of the electrocardiograph, "the limitations and possibilities of which have only partly been realized"? The evidence of this increased heart action should claim attention sufficiently long to permit determination of its cause and the type of heart disease present. Is it an acute infection, a compensating mechanism for supplying oxygen, one of the focal infections, digestive disturbances, various febrile diseases, or is it a beginning serious organic lesion of the heart muscle causing auricular fibrillation?

Frequently recurring evidence of slight cyanosis involving the fingers, lips, face, or other

portions of the body requires careful investigation as to the pathology, and from the standpoint of differential diagnosis it is especially important not to confuse the false cyanosis which occurs in polycythemia with that seen as one of the early symptoms of cardiac strain. Unless due to the action of certain drugs, cyanosis itself is probably always due, according to Norris and Landis, to an excessive degree of oxygen unsaturation of the blood. Also dyspnea or shortness of breath is always a distressing factor in cardiac weakness, manifesting itself by a sensation of oppression and constriction in the chest which has been brought about by a slowing of the blood stream through the lungs. These paroxysms may occur at any time and apparently without cause, the patient being compelled to assume an upright position for hours or even days; yet very little, if any, imbalance is found except a pulmonary congestion.

Another quite positive sign or symptom indicative of cardiac failure is cardiac asthma, which produces a distressing dyspnea occurring at night, beginning as a respiratory difficulty, and lasting for hours in some cases. It is not very difficult by careful study to distinguish cardiac asthma from essential asthma, as in the former the onset is more sudden, and the maximum intensity reached more rapidly, the paroxysm does not end in the expectoration of sputa containing Charcot-Leyden crystals, and upon auscultation there is no appreciable sign of asthma, or only a few fine râles.

Other structural changes in the later stages that should challenge attention by showing the more common phenomena of decompensation are the acute or chronic degenerative changes with hypertrophy and dilatation.

The change from a myocarditis with no evidence of decompensation to a condition of chronic myocarditis with decompensation may be and frequently is very insidious and not easily recognized until muscular insufficiency begins to demonstrate itself by hypertrophy and dilatation, with a displaced apex beat, or one that is diffuse with feeble impulse, disordered rhythm, irregularity of the pulse, deranged digestion, faulty elimination, disturbed metabolism, and chronic passive congestion of the various organs. When these pathologic conditions are present, a slight extra cardiac strain will cause a disastrous train of symptoms: the subcutaneous tissues become edematous, the liver swollen and tender, the lungs marked by passive congestion, effusion takes place in all the serous cavities, the patient is very dyspneic, cyanosis is marked, general venous stasis is always present, orthopnea is common, jaundice may supervene, gastro-intestinal symptoms are aggravated as evidenced by nausea and vomiting, the urine if examined will show a high specific gravity, with casts and albumin, bloody expectoration is frequently observed, and the Cheyne-Stokes type of respiration is present, with a fatal termination impending.

DIAGNOSIS AND PROGNOSIS OF CARDIAC DECOMPENSATION

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What factors determine the deterioration of heart power and endurance? Why do hearts fail under normal living conditions? Clinical and preventive medicine are unmistakably challenged to diagnose the earliest symptoms of a failing heart before complete failure ensues. If the failing heart had been properly diagnosed and treated, heart failure would not so frequently be given as the cause of the patient's death.

From the viewpoint of relative frequency and importance in diagnosis and prognosis, and for the sake of conciseness, the different forms of heart disease may be divided into three groups, accepted by distinguished cardiologists. It is presumed that all cardiac diseases, except congenital, begin as acute conditions and later become chronic. Some are primary, others secondary when considered in relation to other organs.

Group 1—Acute Infectious Heart Disease, Later Becoming Chronic, or the Rheumatic Heart. Under this heading are grouped the various muscular and valvular inflammations resulting from rheumatism, tonsillitis or chorea, and focal infections. The chief offender is the streptococcus, which causes a majority of cardiac affections. The preliminary history is obtainable, and the physical signs vary with the location. It is the most common cause of heart disease in young people and children, and the largest contributing cause of chronic lesions. In this group the diagnosis may be made early, and the tendency to heart decompensation anticipated. In the prevention of decompensation lies the physician's greatest field of usefulness.

Group 2—Syphilitic Heart Disease. This, when considered in relation to middle life, and anatomically in relation to the aortic valve, should be accorded second place in classification. Pathologic findings are most common in the muscular walls and the valve referred to. Further evidence may be found by the presence of an aneurysm or the history of a positive Wassermann from the spinal fluid or blood.

Group 3—The Renal Arteriosclerotic Type of Heart Disease. This is the most frequent form of heart disease found. Associated

kidney disease is predominant in this group, with more or less high blood pressure. Senile and premature sclerosis of the blood vessels of the heart proper is found. There may be murmurs with accentuation of sounds, and change in the heart boundaries. Urinary findings are important. This type occasions the end of many lives, and any appearance of decompensation or congestive failure is the beginning of the end. Two to five years is given as the average duration of life at this stage. The electrocardiograph is of much value from a prognostic point of view. Inverted T waves, especially in all Leads or Leads II and III, peak notching of the QRS, or low-grade QRS waves, are significant of myocardial change and grave prognosis. Bundle branch block, auricular fibrillation, or fluctuation increases the gravity. It is stated that "in hypertensive heart disease, of those cases having a diastolic pressure of 130 or over, a large proportion die within two years; or a diastolic pressure of 150 or above, the probability is of an early death."

Other types are relatively infrequent and less important from a diagnostic and prognostic point of view.

With this classification it should be easier to study heart disease. Certainly, therapeusis and prognosis should be less and less difficult as knowledge of the underlying cause increases. The prognosis depends upon the stage of decompensation. Symptoms vary from the slight shortness of breath and more easy fatigue of beginning heart weakness to the severe dyspnea and anasarca of grave decompensation; from a slight sensation of pressure to the most agonizing pain of angina pectoris; from palpitation or dyspnea, which may or may not be brought on by physical or emotional excitement, to nocturnal paroxysms; from vertigo to the congestive type of headache. Cough also is frequent, together with intermittent irregular heart action and weak heart sounds.

Diagnosis of heart affections, as well as prognosis, with or without evidence of decompensation, has been greatly aided by the electrocardiograph. This instrument, however, has not opened up a "royal road to diagnosis." For, while the pulse writes its own hieroglyphics, these have to be expounded, and they may check, confirm, or extend the diagnosis already made and frequently throw new light on a difficult subject. The electrocardiograph provides the best analysis of cardiac arhythmias and myocardial disease. It supplies the earliest evidence of cardiac response to digitalis, and shows how long a heart remains under its influence. Repeated records give information of the progress of the disease, so that it is a valuable aid in the field of prognosis.

Cardiac affections touch life at so many points that the prognosis is more important than perhaps in any other disease. So many questions arise which are of vital interest to the patient—how long he may expect to live; what is the probability of sudden death, for to the laity the diagnosis of heart disease means that this is inevitable; what occupation may be safely pursued; how much exercise may be taken; and, in the case of children, whether they can continue in school. Very important is the advice to be given women with cardiac lesions as to whether marriage, pregnancy, and childbirth are permissible.

For the prognosis in all cases of heart disease, it is necessary to be sure of the cause of the cardiac lesion. Broadly speaking, cardiac affections may be divided into those resulting from rheumatism or chorea and which appear earliest in life, and those due to degenerative arteriosclerotic conditions which manifest themselves later in life. Usually the prognosis is much better in the rheumatic cases, where the lesion is likely to become stationary, or at least not active, and is more compatible with long life than the arteriosclerotic cases, in which the lesion is almost necessarily progressive. In rheumatic hearts with continued active infection and evidence of congestive failure, the outlook is bad. Auricular fibrillation adds to the gravity, and, when present, it is well to warn the family that sudden death is possible.

Mitral stenosis is commonly associated with the less marked forms of rheumatism, such as stiff neck, indefinite pains in the limbs, etc. No serious symptoms may arise for years, and with care such hearts may cause little trouble for a long period, or even live out their expectancies, but when the heart begins to fail, compensation is difficult to restore. If mitral stenosis is detected in a child, the prognosis is more serious, and such children seldom live to reach the age of forty years. Auricular fibrillation, in cases of mitral stenosis, is more serious because evidencing changes in the muscles.

There is a marked difference between aortic disease of rheumatic origin and that of degenerative conditions. Aside from the risks of later attacks of rheumatism, the former may be more or less stationary. This cardiac lesion carries with it a favorable prognosis for length of days and amount of work the patient may accomplish. In this, as in all forms of heart disorders, fairly hard work may be undertaken if it is regulated and the patient has been accustomed to it.

In the arteriosclerotic forms of aortic disease the lesion is almost always progressive. Treat-

ment may arrest its development for a time, but permanent improvement is impossible, owing to changes in the coronary arteries which may give rise to the most serious symptoms connected with aortic disease, namely angina pectoris. This disease is alarming because of its pain, and also because it indicates a degeneration of the cardiac muscles and the likelihood of sudden death. Patients with angina pectoris who show no evidence of heart disease should, with good care, have a favorable prognosis.

In aortic syphilitic disease a guarded prognosis is necessary and is usually grave. These cases have a special predisposition to sudden death because the myocardium and the aorta have been affected by the syphilitic poison. In addition, there is danger of an aortic aneurysm developing. Evidences of cardiac insufficiency or fibrillation in cases of aortic disease warrant a serious prognosis. The early stage of this disease is symptomless, so that when symptoms occur, it is evidence of beginning decompensation. Treatment is sometimes surprisingly effective, but as a general proposition, syphilitic hearts after decompensation run a fatal course in three years, and after congestive failure, in one year.

Beside the various valvular lesions which have been but superficially touched upon by reason of limited time, the heart muscle must be considered. This may be seriously impaired without any obvious physical signs. It may be said that no matter what the heart affection may be, its symptoms depend mainly upon the strength or weakness of the cardiac muscles. But there are fashions in medicine just as there are in art and philosophy, and medical men sometimes go to extremes as do men outside the profession. We should strive to keep a middle course. The discovery of auscultation focused the attention of practitioners upon murmurs. While their significance was somewhat overrated in the past, we may now be in danger of swinging to the other extreme and concentrating all our attention upon the heart muscles, neglecting the significance of valvular lesions. In all heart diseases, the patient must be regarded as a whole and we should not be lead away by pronounced and very evident physical signs. To achieve this, we should have a thorough knowledge of the location and pathology of the various lesions. In the treatment, the history and the symptoms must be carefully considered for effective results. Otherwise the knowledge of the location will prove of slight practical importance.

A prognosis can be given more definitely than formerly as the result of increased knowledge of cardiology. This prognosis is based largely upon the group in which the case is classified as to history and etiology, together with the physical findings and the result of treatment.

TREATMENT OF CARDIAC DECOMPENSATION

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These remarks will be limited to underlying principles and comments on therapy.

Bearing in mind that many of the etiologic factors are comparatively slow in causing disability, prophylaxis at once suggests itself as the most hopeful method of combating this leading cause of death.

Prophylaxis

Wherever possible, treatment should be started before structural damage is demonstrable. We must be on guard whenever dyspnea, tachycardia, discomfort in the chest, and undue sense of fatigue, unexplained by evident disorder in the heart or other organs, appear in a patient having had in the past, or having at the time of examination, a disease known to cause heart damage.

All acute infectious diseases require thorough treatment, protracted convalescence, and the elimination of possible foci of infection during a quiescent period. Kolmer[1] states that the instrumentation necessary may be followed by an exacerbation proving the relationship, presumptively, of the primary and secondary infection. When drainage or extirpation of the focus cannot be accomplished, he suggests the administration of a properly prepared autogenous vaccine.

Stroud[2], among others[3], believes that prolonged institutional care of rheumatic children will not only greatly lessen the possibility of the reactivation of an endocarditis, but a recurrence of the original etiological factor as well.

In patients acquiring syphilis the problem differs because the primary lesion is regarded by many as entirely local. Spirochetemia, according to Warthin, begins in the early stages, the secondary lesions occurring at its height. He also states that one infected always becomes a spirochete carrier, the heart and aorta in males being favorite sites for this organism. Virchow first stressed the fact that syphilitic myocardial disease is very common. Moore and Kemp,[4] in a study of 402 patients, found cardiovascular syphilis the most common tertiary involvement. Unrecognized congenital syphilis frequently terminates by the dramatic route of sudden death. From its inception, syphilis should be regarded as a general disease. Putting these patients to bed during the early treatment may prove of value, since we are unable to demonstrate by

physical signs the actual invasion which presumably takes place.

The prophylactic treatment of the chronic varieties of heart disease, associated with arteriosclerosis, hypertension, Bright's disease, and senescence, consists in the suppression of all possible unfavorable underlying conditions, the removal of foci of infection, the regulation of the output of effort, the improvement of general hygiene, and frequent physical examination to insure prompt attention to such changes as may occur.

The prophylaxis of toxic heart disease is well exemplified by the removal of an overactive thyroid before serious damage to the heart has been done.

Principles of Treatment After Structural Damage Has Taken Place

Congenital Heart Disease

Protection against infection and mechanical strain constitute our main reliance for the prolongation of life.

Acquired Heart Disease

Class 1.* Patients with organic heart disease, but able to carry on ordinary physical activity. The management of this group consists in treatment of the underlying factor, elimination of foci of infection, regulation of the output of effort, changing the occupation if necessary, and insistence upon periodic physical examinations.

Class 2. Patients with organic heart disease, but unable to carry on ordinary physical activity: (a) activity slightly diminished; (b) activity greatly diminished. Therapy, based upon etiology, frequently advances these patients to Class 1. Elimination of foci of infection must be done with caution in subgroup "a," and should not be done by choice while the patient is in subgroup "b."

Class 3. Patients with organic disease, having symptoms of heart failure at rest. Accuracy of diagnosis is even more necessary than in Classes 1 and 2 because the patient will not improve if the therapy employed is not definitely indicated. To illustrate: The congestive heart failure caused by auricular fibrillation in rheumatic heart disease must be differentiated from the same type of failure caused by toxic goiter, as digitalis is of greater value in the former condition. In anginal failure we must distinguish angina pectoris from coronary occlusion before administering nitrites. In syncope arising from bradycardia we must determine whether it is of vagal or organic origin; in the former, atropin is of value, while in the latter, barium chlorid is indicated.

* Functional classification adopted by the American Heart Association.

Comments On Therapy

Digitalis finds its best use in evident congestive heart failure, permanent auricular fibrillation, and as a therapeutic test.[5] Hyperthyroidism or fever causes a poor response. Hamman[6] favors it in coronary occlusion; Christian[7] opposes it. Administration by mouth or by vein of the same dosage varies only in speed of effect. The same is true of moderate dosage and dosage by the Eggleston method. If a maintenance dose is required, as in many patients with auricular fibrillation, the daily excretion of the drug, twenty to twenty-five minims, must be borne in mind. Drop dosage is grossly inaccurate. I recently checked a dropper which delivered seventy drops to twenty-five minims. To be effective, digitalis must be given in adequate dosage.

Morphin is always indicated in any form of heart disease when restlessness or severe pain is present. It does not depress the circulation.

Caffein is useful at times for patients who show evidence of collapse.

Epinephrin is of value for many patients who have complete standstill of the heart, if it is injected directly into the heart muscle.[8, 9]

Barium chlorid has recently come into clinical use to stimulate the idioventricular pacemaker thus preventing convulsive seizures in the Stokes-Adams syndrome. For the acute emergency, however, epinephrin remains the drug of choice, barium chlorid being given between attacks, as its effect is more lasting.[10, 11] Calcium lactate has been used in conjunction with barium chlorid.

Nitrites are useful in angina pectoris. White[5] prefers nitroglycerin to amyl nitrite. Nitrites seem to be of temporary value in patients with dangerously high blood pressure, but in those having a regular pulse rate with an unstable hypertension, Christian prefers digitalis.[12, 13]

Liver extract, ephedrin, tyramin[14], and cucurbocitrin[15] have actions on the circulatory system which are not fully understood.

Quinidin is of use in the treatment of comparatively few properly selected patients with frequent premature beats, paroxysmal tachycardia, or transient and paroxysmal auricular fibrillation. The changes occurring during its administration should be checked up by instruments of precision. In permanently established auricular fibrillation with badly damaged heart muscle, disaster has frequently occurred following its use.

Veratrum has been suggested for simultaneous

slowing of the ventricular rate and lowering of blood pressure. It is uncertain and irregular in action.[16]

Diuretics. In addition to caffein, theobromin, and the other older diuretics, two acid-forming salts, calcium chlorid and ammonium chlorid, and the mercurial merbaphen (novasurol) are available in cardiorenal disease. They are particularly indicated in patients with retention of salt and water, when edema has not been affected by the use of diets low in salt and fluid.[17-23] Before these diuretics are tried, we must determine, if possible, whether the heart muscle, the circulation, or renal system is at fault.

Antisyphilitic drugs. Mercury, iodids, and arsphenamin in small doses, should be used wherever a clinical diagnosis of syphilis of the heart or aorta is made, despite a negative Wassermann reaction, and in every patient with a positive Wassermann reaction who has symptoms suggestive of heart disease, even in the absence of demonstrable physical signs. Indiscriminate use of arsenicals may result in swelling of the intima of small vessels, and thus increase the risk of thrombosis.[24] Bismuth, exclusively, is said to be of no value in cardiovascular syphilis.

Thyroid administration helps patients who have congestive or anginal failure associated with myxedema.[25]

Dyes and arsenicals in septic and subacute bacterial endocarditis afford very little aid, immunotransfusion now being in fashion as a last resort.[26, 27]

Relief of Angina Pectoris by Surgical Methods

Although Mackenzie[28] believed that these methods were based upon incomplete observations, Levine and Newton[29] think that, with careful selection of the patients, the operation may prolong life and at the same time afford great relief. It must be understood by the patient that it is only palliative and does not cure the underlying condition. Injections of novocain and of alcohol intravertebrally have been tried, Swetlow claiming success with the latter agent.[30]

In addition to prophylaxis and treatment of heart disease by physicians, the public must play its rôle in this problem by providing the means for special heart hospitals or well-organized departments in general hospitals, convalescent homes, trade schools, social service, and cardiac dispensaries.

If we can determine the etiology and the degree of disability, and if the necessary facilities are put at our disposal, even our present incomplete knowledge of the treatment of cardiac decompensation will preserve and prolong many useful lives.

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ABSTRACT OF DISCUSSION

On Causes of Cardiac Decompensation

George W. Norris, M.D. (Philadelphia, Pa.): Myocardial failure can be attributed to five different factors: (1) coronary disease, which is the causative factor in 20 to 30 per cent of cases; (2) local infection or continued infection—local or general; (3) arhythmia; (4) collateral disease; (5) endocrine disturbance, such as hyperthyroidism or hypertension and last of all, undue physical exertion. In this regard there is still a good deal of misapprehension. A weak heart is too apt to be attributed to some undue exertion. While this may have played a part, in 95 cases out of 100, the coronary artery or continued infection is at fault.

Autopsies show myocardial changes in only about 30 per cent of cases. This emphasizes the point that all of us think too much in anatomic instead of chemical terms. Myocardial failure is due not so much to degenerative changes of the heart muscle as to chemical changes resulting in exhaustion of this muscle, the function growing worse and worse, and with no reparative changes.

I am inclined to believe that the apparent increase of cardiac decompensation caused by syphilis is due to the fact that the disease is more frequently recognized in the early stage since it is known that the spirochete selects the aorta as a place of lodgement, and physicians are constantly on the watch for it.

A stumbling block in early diagnosis is the effort syndrome, which may present a perfect picture of heart disease. Some of the most serious mistakes made in diagnosis of heart disease are due either to the effort syndrome or hyperthyroidism.

The national classification of heart disease, used by Dr. D'zmura as a basis for his paper, should be adopted generally. Uniformity of classification has been helpful in eliminating tuberculosis, and if applied to heart affections, we should be able to understand each other much better and accomplish more.

W. G. Falconer, M.D. (Clearfield, Pa.): Decompensation is frequently present when no cause for it is apparent, and the expected heart changes are not found even at postmortem examination. On the other hand, changes are found postmortem when there have been no symptoms of cardiac decompensation and the patient has died of some other disease. Many cases of decompensation, I believe, are due to thyroid conditions. It is not only toxic goiter that causes myocardial damage. It frequently does less harm than the so-called simple goiter because the acute toxic cases are usually taken care of before the heart muscle has been permanently damaged. Plummer has shown that simple goiter which had probably not caused other symptoms will later cause cardiac decompensation, the average time being about fourteen years after the appearance of the goiter. I agree with Dr. Norris that the cause lies not in the pathologic anatomy, but in the biochemical changes that have escaped discovery.

Many such cases of cardiac decompensation with auricular fibrillation will become regular on iodin alone, when digitalis, quinidin, or other treatments are ineffective. Removal of the diseased thyroid, followed by administration of thyroid extract, will always greatly improve and in many cases entirely clear up the decompensation.

I do not advise the use of iodin in all cases of thyroid disease, as we have been taught that iodin should not be given to patients with adenomata. On the other hand, not so many years ago, when the older physician used digitalis in these cases without results, since many such patients had hypertension, he discontinued the digitalis and administered potassium iodid—which was recommended for hypertension at that time—and the cardiac decompensation cleared up and the blood pressure came down. He thought that the potassium iodid acted as an alterative causing a change in tissue, lowering blood pressure, and thus decreasing the work of the heart and reëstablishing compensation. This was true, but the alterative was the iodin radical of the K. I. acting on the thyroid gland, stimulating it and causing an increase in basal metabolism which helped to burn up some of the clinkers and produce absorption of fibrous tissue, improving the rubbery arteriosclerosis and at the same time iodizing the altered thyroid secretion which was causing the cardiac decompensation. I believe that iodin therapy requires further study in the treatment of cardiac decompensation due to thyroid disease.

Thomas McMillan, M.D. (Philadelphia, Pa.): Many cardiologists have about adopted the view that, in children, at least, cardiac decompensation is the result of some continued and active infection. This observation can scarcely be extended to adults, since there are so many other obvious causes, such as thyroid conditions.

It is difficult to estimate the relation of continued infection to cardiac decompensation. Wilson and Kopel, of New York, have recently reported some work in which they compared the leukocyte curves in children with the vital capacity. As the number of leukocytes rose, the vital capacity was decreased. If the leukocytes are a fair estimate of the degree of infection and the vital capacity is a measure of the efficiency of the heart, then an increase of leukocytes and decrease of vital capacity would show that continued infection is a potent cause of cardiac decompensation.

Aaron S. Cantor, M.D. (Scranton, Pa.): It is essential to take the patient with early decompensation into our confidence and explain the necessity of preserving his physical well-being—that just as an individual has to maintain life within his financial means, so he must learn to live within his physical means, and that unless he does so, he will go physically bankrupt and get into such a state of cardiac failure that his life will be threatened and absolute rest in bed will be necessary.

When a patient who has been confined to bed improves to such an extent that he is able to assume certain limited duties, functional tests are of value in estimating the amount of exertion he may be allowed. Of these, the hopping test appeals to me as one of the most valuable. The objection offered to this test is that no two individuals will put a like amount of effort into it. It is this individual variation which, in my opinion, makes it of greater value, for just as the patient who goes into the functional test with great vigor does everything else with like force, so the one who does the test slowly will do everything else in the same manner. This, then, becomes a personal equation that is really of the greatest practical value in advising the amount of effort the patient may make.

Most of these patients are anemic. It is not uncommon to find the hemoglobin down to 40 per cent. Treatment of the anemia, as well as limitation of exertion, special diet, regulation of the general mode of living, and removal of foci of infection, is a valuable part of the therapy.

In some of the focal infections, and more particularly in prostatic conditions, the use of foreign protein has a certain value that cannot be overlooked.

RESERVATIONS FOR PITTSBURGH SESSION

Due to the limited number of rooms available at the Hotel Schenley for members accompanied by their wives, it becomes necessary to insist that all reservations for the Pittsburgh session of the Medical Society of the State of Pennsylvania be made only through the Committee on Hotels, Dr. I. H. Alexander, Chairman, Jenkins Building, Pittsburgh, Pa.

Clinical Reports *

POSTENCEPHALITIC PARALYSIS OF DOWNWARD MOVEMENT AND OF CONVERGENCE

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W. B., aged 22, was first seen July 26, 1925, when he gave the following history: In January, 1923, he began to see double. For three months previous he had had attacks of nausea followed by vomiting. The diplopia lasted two weeks, and then both lids drooped so that he could not see, but when the lids were raised the diplopia had disappeared. The ptosis lasted two weeks, and when it cleared he found that he could not see near objects and could not look down. After this he was unable to read except for about a minute, when things all ran together.

For the past year he has had frontal and occipital pain. His chief trouble at present is that he gets very sleepy, and has difficulty in walking, as he is unable to look down and must lower his head. This causes pain in his neck. He is very nervous, cries easily, and gets to trembling, usually on the left side. Both legs become very cold at times, especially the left.

At this writing, the patient has a masklike face, with apparently some flattening of the left side, the wrinkles of the right forehead and mouth being more prominent. There is slight ptosis of the left upper lid. The lateral ocular movements are good, the upward movements quite limited, and the downward movements abolished, the patient being unable to move the eyes at all below the horizontal plane. There is apparently no convergence power, the left eye turning in, but the right swinging out, although each eye converges when the other is covered. The right pupil is 4 mm., the left 2.5 mm. Both react very little to light and accommodation. The refraction under homatropin is R. 15/50+.25⊂+1.25 ax. 90=15/12—; L. 15/40—.25⊂+1.25 ax. 90=15/15+. The fundi are negative. At the postcycloplegic test, the patient took —.50 sph. added to the right, and —1.00 sph. added to the left. With the Maddox rod over the right eye for distance, there were three degrees of exophoria and two degrees of right hyperphoria, but only one degree of the latter when the patient lowered his head. With the Maddox rod over the left eye, there were two degrees of left hyperphoria, but only one degree when he lowered his head. He saw double at 32 inches, and could not obtain single binocular vision inside this point. He read 1 M. print at 7.5 inches with the right eye aided by a +2.00 sph., and with the left eye at 9 inches without the sphere. His ductions could not be tested, as diplopia was immediately obtained when a one-degree prism was placed before his eye. The diplopia fields were unsatisfactory because of the abolition of downward movement. Plotting showed slightly increasing crossed diplopia to the left, indicating right-internus involvement, and on careful examination, slight limitation of inward rotation of the right eye could be noted. The corneal sensibility was normal, though the upper half of each cornea seemed more sensitive.

On August 7, 1926, the patient was seen by Dr. C. A. Patten, who confirmed the diagnosis of postencephalitic parkinsonian syndrome, and suggested the use of tincture of hyoscyamus. This was ordered, and he was given glasses in which were incorporated ten-degree prisms, base down, in order to help him to look down.

This case is reported, not because of its rarity and the unusual functional involvement, but to invite attention to certain ocular complications of encephalitis lethargica. These include disturbances of upward and downward movement, of divergence, convergence, and related pupillary affections. Although I have not made a systematic study of these cases, I have been struck by the frequency with which convergence has been involved. These patients do not usually complain of diplopia even though their convergence is manifestly very weak. This may be due to the natural inability to recognize diplopia which so many patients exhibit when their convergence is tested. It may also be an acquired suppression, as most of these patients are seen some time after the acute stage.

The mechanism of convergence and divergence is so poorly understood that the importance of study of these cases is manifest. It is only by very careful observation of clinical phenomena and autopsy findings that something may be learned of these functions.

In the case reported above it is of interest that even though there was a paresis of accommodation, the patient would not accept full correction at the postcycloplegic test. This seems to indicate that the lesion, which is probably central, is entirely divorced from the refractive error or peripheral condition. It is noteworthy, however, that the greater amount of latent hyperopia was in the eye in which accommodation was least affected.

The right and left hyperphoria furnishes interesting speculation. This seems to controvert the rule of secondary deviation in paralytic conditions—at least if one looks on the paralysis of downward movement as the predominating palsy. The bilaterality of the palsy, however, probably nullifies the rule. From the reported cases, one would expect the elevators of the eye to be involved in any spastic condition that might be present, rather than the depressors. This may account for the hyperphoria, though it is difficult to understand how a muscle or function may exhibit paralysis and spasm at the same time.

In view of the greater involvement of convergence than accommodation, the failure of the pupils to react when the eyes look at a near object suggests that pupillary contraction is a convergence rather than an accommodative reaction.

Paralysis of accommodation, in this case, differs from that usually seen in that there is no dilatation of the pupils, though the larger pupil

* Abstracts of papers presented at the clinical meeting of the Section on Eye, Ear, Nose and Throat Diseases of the Medical Society of the State of Pennsylvania, held at the Medico-Chirurgical Hospital, Philadelphia, October 12, 1926.

is in the eye with the greater paralysis. This lack of dilatation in these cases appears to be the rule, and I am inclined to think that the aniscoria in this case is due to some extraneous factor, and is not a concomitant of the accommodative paresis.

CHRONIC FRONTAL SINUSITIS (BILATERAL) WITH FISTULA OF SEVEN YEARS' DURATION

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Previous to his discharge from the Navy in 1919, the patient contracted a heavy cold, followed by frontal sinusitis. The usual treatment failing to relieve his severe headaches, he was hospitalized, and his frontal sinuses were trephined through the anterior plate in the midline about one and a half inches above the root of the nose. So long as this opening remained patulent, he was free from symptoms, except the pustular discharge.

When first seen, he was wearing gauze dressings over the wound, which was kept open by a wick of gauze drainage. His discharge was rather free, requiring the changing of dressings three or four times daily. He stated that he had been in this condition for the last seven years.

Under local anesthesia, the anterior end of the left middle turbinate and the adjacent ethmoidal cells were removed by the intranasal route, along with all hypertrophied and polypoid tissue dependent upon the sinusitis.

Four days later, a modified Lothrop operation was done under general anesthesia. The usual incision through the eyebrow was made, but instead of stopping just beyond the nasal end of the hair line, the incision was carried to the midline of the forehead, thence upward, encircling the scar tissue of the trephine opening. This flap of tissue was dissected upward and outward, exposing the anterior plate of the left frontal sinus. When this plate of bone was removed and the sinus inspected, it was found filled with degenerated polypoid tissue, especially at the lower angle. The intrasinus septum had either been broken through at the previous operation or reabsorption had occurred, the right sinus containing the same degenerated mass of debris as the left. The intrasinus septum was bitten away in its entirety with bone-cutting forceps, and both sinuses curetted.

It was noted that the base of the left frontal sinus was of a darker color than normal. This was carefully broken through, and a large supra-orbital ethmoidal cell was found filled with the same degenerated material. Curetting this out, it was found that the cell extended outward beyond the limits of the floor of the frontal sinus. All partial septi through both the frontal and the large supra-orbital ethmoidal cell were removed, leaving one large cavity. This was drained intranasally by the rasping of the natural ostium and the removal of the anterior superior nasal process. Rubber tubing the size of a lead pencil was brought down through this ostium, the inner end being placed at the center of the floor of the large cavity and the other end brought out of the nose. This tubing was left *in situ* for ten days to allow cicatricial tissue to form around it, thus making a new and larger ostium.

The usual after-irrigations were continued for two weeks, when all pustular discharge and other symptoms had subsided, and the patient was discharged as cured.

A POSSIBLE FUNCTION OF THE SINUSES

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To understand an organ one must know its purpose. Many theories have been advanced as to the normal function of the sinuses, and these additional suggestions are submitted in a spirit of true scientific humility, with the hope that they may prove to contain some small degree of truth. There is a close relation between the physics and the physiology of the sinuses. Unquestionably, they are continually under a certain amount of air pressure. The sinuses and every cell in them are always filled with air. If this were not so, the external air pressure would speedily cause a collapse of the cells. This contained air, therefore, surely must act as a buffer to the underlying structures—a protective feature both as to heat and cold. If so, the sinuses are the main factor in tempering the extreme degrees of heat and cold in the nasal cavities. Histologic studies on the sinuses of quadrupeds give evidence of the effort of nature to augment this condition in the lower animals by providing a large number of interlocking sinus cavities and air spaces.

The presence of any pathologic condition in the head will certainly change this normal physiologic action of the sinuses. In fact, it is the shifting of the air pressure in these cavities that disrupts the physiologic equilibrium. The regulation of this equilibrium is, after all, the determining feature in normal health as distinguished from pathologic conditions.

The pressure on the body is determined by the barometer. Just as the blood alkalinity is determined by this same factor, so is the normal function of any organ disturbed by barometric deviations, and so are the functions of the sinuses disturbed. The air pressure in the cells of the sinuses is constantly changed by the barometric pressure outside the body, and if there are any pathologic conditions which prevent a regulation of the normal equilibrium between the sinuses and the normal bodily pressure within, there will most likely be varying degrees of bodily reactions. There must be a normally constant ratio maintaining between these two factors, or else there will be varying sinus symptoms, with resulting pathologic changes.

This physico-physiologic relation is disturbed

by change of altitude or by the development of any disease in the kidney or other functioning organs. Even if the alkali reserve of the blood is lowered, pressure in the body becomes relatively too high, and pressure symptoms ensue. If the barometer drops, the external pressure on the body changes. Any pressure changes in the sinuses naturally result in pain and headaches. Unless the normal physiologic equilibrium that should exist between the forces in and out of the body be maintained, attention will undoubtedly be drawn to it by the symptoms that ensue.

Therefore, I submit that the sinuses have a normal function in the regulation of varying degrees of air pressure and to aid in tempering degrees of heat and cold. Various scientific data bearing out this relationship have been found, but very little has been written up to this moment.

Lenox Apt., Thirteenth and Spruce Sts.

BILATERAL POSTERIOR LENTICONUS

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Lenticonus, or lentiglobus, is a conical or globular projection of the surface of the crystaline lens of the eye. When the anterior surface of the lens is affected, it is known as anterior lenticonus; on the posterior surface it is named posterior lenticonus. According to the teaching of Swanzy, lenticonus is a congenital anomaly in which the anterior variety is found more often than the posterior. Fuchs believes that it is a rare anomaly which is usually congenital.

The first recorded case of lenticonus was studied and reported by Wester in 1875. This case was also studied by Knapp. As a result of their studies, they concluded that the condition was either hereditary or it had been acquired early in life. This case was bilateral. The second case was reported in 1880 by Placido and Van der Laan. They felt that lenticonus was of gradual onset, with its beginning in early puberty. The third case was studied and reported by F. Meyer in 1888. He took exception to the conclusion of Placido and Van der Laan. Meyer reasoned that if lenticonus develops first at puberty it cannot be a formation anomaly. He concluded with the opinion that the process is pathologic, because in his case the posterior capsule of the lens showed a distinct haziness or cloudiness. Eisick reported a case of lenticonus in 1892. He decided that his case was congenital. Leopold Mueller, in 1894, as a result of his studies and observations in lenticonus, was undecided as to whether it was congenital or acquired, but he rather believed that it developed after birth. Pergens, in 1902, analyzed twenty cases collected from the literature. He found that the lens was transparent in only seven cases. Later investigations show a lower rate of associated cataract.

Judging by the space allotted to it, lenticonus is considered to be relatively unimportant by the average textbook writer—this, too, in spite of the fact that it is generally misdiagnosed cataract. The largest space is given to the subject by Roemer.

The case to be presented is that of a male aged 49 years, who has had a great deal of trouble with the vision, that of the right eye being poorer than that of the left. He has had frequent changes of glasses without relief. He was first examined by the writer on February 23, 1925. His history revealed that he had had a change of glasses two weeks before his visit. These lenses, according to the patient, made his vision worse. The specialist who examined his eyes told him that he had cataract, and later would need an operation. The vision at that time, wearing his new correction, was O.D. 6/40; O.S. 6/40.

The patient's father had very poor vision, which was attributed to "cataracts that would not ripen." The last glasses which the father wore were a —8.00 D. sph.⌒ —.75 D. cyl. axis 180° in each eye. The patient has a sister who also has a bilateral posterior lenticonus.

A grayish pupillary reflex, suggestive of cataract, was revealed by external examination. However, after dilating the pupil, it was noticed that the apparent cataract was central, with a peripheral clear zone surrounding it. Oblique illumination revealed the fact that the lens was transparent to the posterior pole. (In some cases, cloudiness, which may assume different shapes, may be found. Complicating posterior polar cataract, if sufficiently pronounced, may be observed by oblique illumination. In one of lesser degree it will be detected only with the use of the ophthalmoscope.)

Using a bulb in a hand flash light in a darkened room, and studying the Purkinje-Samson images, it will be noticed that when the source of illumination is moved about, as it is brought nearer to the axis of the eye, the image reflected from the posterior surface becomes elongated. It also appears to come from a greater depth than in the case of a normal eye.

With the ophthalmoscope, using a concave mirror and a +4 D. lens and at a distance of eight inches from the eye, a sharply defined dark disk is visible in the center of the red reflex. It is darker at the edge. This varies according to the distance at which the ophthalmoscope is held from the patient's eye. Viewed from different levels, and changing the position of either the patient's eye or the mirror, the position of the shadow will be found to change. The direction and amount of parallactic movement demonstrates that the shadow is cast from a curved surface behind the plane of the iris. This location corresponds with a bulging posterior surface of the lens, or a lenticonus.

The case reported here is bilateral. The condition in the right eye is stationary. Recently the refraction of the left eye showed a decrease from a —3.75 D. sph.⌒ —.37 D. cyl. axis 135°, which the patient was wearing before the left eye, to a —.50 D. cyl. axis 130°, probably due to a flattening of the conical projections.

1724 Spruce St.

A NEW AND SIMPLE PLASTIC-FLAP METHOD IN THE RADICAL MASTOID OPERATION

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The purpose of the plastic flap at the completion of the radical mastoid operation is, first, to permit the closure of the postauricular wound; second, to provide a sufficiently wide opening for the dressing and drainage through the external auditory meatus; and third, to encourage the growth of an epithelial covering over the cavity in the bone made by the operative procedures. A plastic flap that will meet these requirements successfully would be considered an ideal method.

As is well known, there are quite a variety of flap-method operations in use at the present time. I will not mention all of them but will enumerate the salient features of the more popular ones rather briefly. The very fact of their number, however, shows that uniformly good results have not always been obtained.

Panse incises the posterior wall of the meatus as far as the auricle, but at the external extremity of his incision he makes a T-shaped or two right-angle incisions.

Koerner's flap is a modification of the Panse. He prolongs the two parallel incisions into the concha, whereas Panse reaches only as far as the concho-meatal junction.

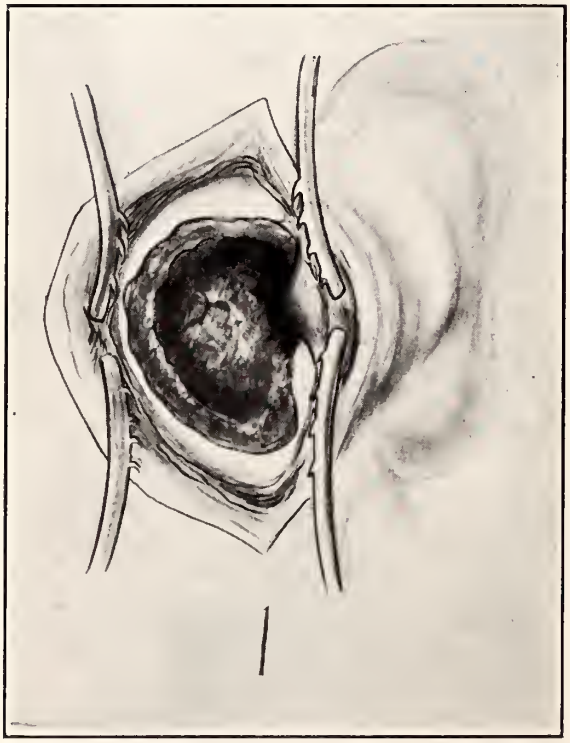


Fig. 1. The exenterated mastoid with the posterior meatal wall.

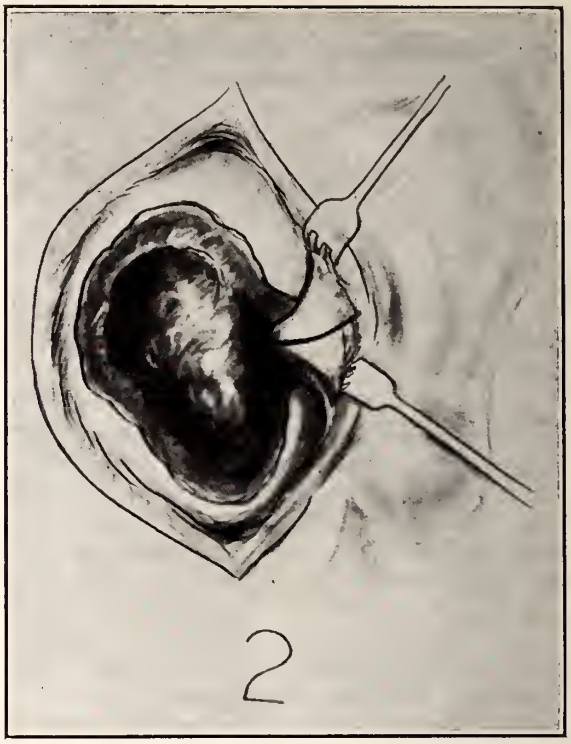


Fig. 2. The incision in the posterior meatal wall extending into the concha.

In the Siebenmann flap, an incision is made similar to the Panse, except that the perpendicular portion does not extend to the concho-meatal junction and that at the extremity one limit extends upward and one downward at an obtuse angle.

Other otologists, such as Ballance, Whiting, and Brühl, have used flap methods which have been more or less successful and which are also, to some extent, modifications of the Panse. In the above-mentioned methods the closing of the postauricular wound presented no particular difficulty, but the resulting smallness of the external auditory meatus and the delay in epidermatization by the traumatism done to the soft tissues were often distinct drawbacks to an otherwise satisfactory flap operation. The attempt to correct these two faults prompted me to try the following procedure.

An incision is made in the posterior meatal wall in a direction parallel to its bony axis, as in the Panse method, but instead of stopping at the concho-meatal junction, as Panse does, is prolonged into the concha for a distance of one centimeter (depending upon the size of the ear). The right-angle, or cross incision, of Panse is purposely omitted. A superior and inferior flap is produced. This resembles the Stacké incision except that it is longer, Stacké stopping at the auricle. If there is much redundant subcutaneous tissue it is cut away, but

an effort is made not to be too radical here because of the danger of interfering with the blood supply of the skin remaining. The upper flap is anchored in the region of the attic vault by means of a silkworm-gut suture which goes through the temporal muscle and the skin. The lower one is attached to the sternomastoid aponeurosis over the facial spur by another silkworm-gut suture which also takes in the skin. The knots are not included in the mastoid cavity, being tied externally. These sutures are left in for ten days. The postauricular wound is closed by interrupted catgut.

The extension of the incision into the concha prevents the occurrence of a small meatal opening, and insures adequate exposure for dressing and drainage. By omitting the right-angle incision, traumatization of the flap is to a great extent eliminated, thereby enhancing the growth of epithelium in the bony cavity.

The method is not only simple, but has the added advantage of being very quickly performed—an important item in a long and debilitating operation. Of course it must be remembered that the success of all flap methods depends considerably on the thoroughness with which the bone is exenterated. An improperly performed radical mastoid operation would naturally impede the epidermatization of the bony cavity. An open and infected eustachian tube would also bring the method into disrepute.

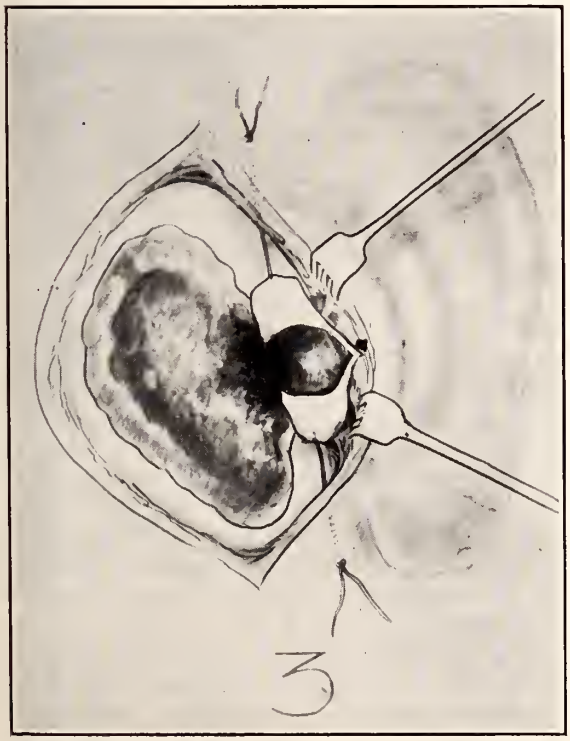


Fig. 3. The formation of the superior and inferior flap kept in position by the silkworm-gut sutures.



Fig. 4. The position of the knots of the silkworm sutures tied externally at A and B.

I have used this flap both in radical mastoid cases and in modified radical (Heath) operations. The two cases following are examples of each.

E. W., white, 15 years old, came to me in September, 1923, with a history of having been operated on three years previously for a right-sided mastoiditis. The examination showed a large fistula in the right mastoid process which exuded a profuse creamy discharge. There was also a considerable flow of the same character from the external auditory canal. The drumhead and ossicles had disappeared, and a mass of granulation tissue was seen instead. There was a suspicion of beginning facial paralysis on the right side, so a radical mastoid operation was decided upon at once. The usual postauricular incision was made, the periosteum stripped with difficulty, and considerable carious bone was found, particularly over the attic and middle fossa. The middle fossa itself was exposed over an area about the size of a five-cent piece. The facial ridge was also involved, and great care was taken in the removal of the necrotic bone not to injure the facial nerve. After the exenteration and the removal of all the granulation tissue, we were ready for the plastic flap. The posterior meatal-wall incision described above was made in a direction parallel to the bony axis of the canal, and prolonged into the concha one centimeter in distance. The redundant subcutaneous tissue was cut away, precautions being taken not to traumatize the flap. The upper flap was sutured to the temporal muscle in the upper angle of the wound, and the lower one to the sterno-mastoid aponeurosis. The flaps were sutured with silkworm gut and left long. The entire cavity was packed with iodoform gauze, the free end projecting through the new meatal opening. The postauricular wound was sewn together with interrupted catgut sutures. The packing was permitted to remain for four

days. One month later almost complete epidermatization had occurred, and the cavity was nearly dry.

M. R., white, 16 years old, seen by me in August, 1925, had a history of discharging ear since childhood associated with headaches, loss of weight, etc. Because much of the drumhead was left and there was considerable hearing, and because of his youth, it was decided not to perform a complete radical but to do a modified radical or Heath operation. The posterior canal wall was curetted away, leaving a small ridge of bone, enough to support the tympanic membrane. The flaps were made as in the previous case, slitting the external auditory canal and extending the incision somewhat into the concha, suturing the superior and inferior flaps in the manner described above. The packing in the bony cavity coming out through the external auditory meatus was left in for about one week. The ear was perfectly dry within two weeks. Epidermatization was complete in three weeks.

1305 Spruce Street.

A NEW METHOD OF CONTROL OF SEVERE NASAL HEMORRHAGE

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The particular type of severe nasal bleeding to which I refer is one resulting from injury to or disease of the general vascular structures such as purpura hemorrhagica, congenital familial telangiectasis, etc., affecting, in so far as we are concerned, the anterior branch of the descending palatine artery as it comes through the anterior palatine canal or at its anastamosis with the nasopalatine branch of the sphenopalatine artery. Injury, through accident, operation, or otherwise, to the above-mentioned artery, at its exit or in the canal, will cause a type of hemorrhage that is often very difficult to check either temporarily or permanently. With other methods of control the remedies used are but temporary, and in several of my cases a recurrence of bleeding has proved almost fatal. The inability of the vessel to contract and cease bleeding in a bony canal (in this case, the anterior palatine canal) for any of the reasons above suggested, presents a difficult situation to handle.

A principle used elsewhere in surgery may be applied here with benefit; namely, plugging of the canal with a piece of wood, such as a piece of ordinary orange stick. This is rather easily accomplished by making a curvilinear incision in the mucoperiosteum of the roof of the mouth just behind the incisor teeth. Injection of one or two-per-cent novocain-adrenalin solution produces anesthesia. The mucoperiosteum is raised sufficiently to locate the incisor foramen, which is the entrance to the anterior palatine canal. The canal is plugged with wood, cutting off the excess, and leaving the plug in place for several days.

A TEMPOROSPHENOIDAL ABSCESS

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In diagnosing temporosphenoidal abscess, a series of symptoms is frequently encountered which makes the decision very difficult. The case herein presented ran an indefinite course at all times, and the various consultants, both medical and surgical, advised against any active surgical intervention.

H. G., female, aged 11, during childhood had had several attacks of acute otitis media which were always properly taken care of. There was a vague history of headaches which were inconstant, and no particular attention was paid to this symptom, which was often attributed to occular disturbance.

On March 14, 1925, the patient contracted influenza. On March 18th she developed pain in the left ear, which was treated by the family physician, and on the 19th I saw her for the first time.

Examination of the ear revealed an acute suppurative otitis media with a bulging eardrum. Ethyl chlorid was administered by inhalation, and the eardrum incised. On March 27th I saw the patient again, with the following findings: Temperature 102°, pulse 120, respiration 20. There was a profuse aural discharge, with pulsation of the pus from the middle ear, although the perforation in the drum was amply large for drainage. On palpation there was slight tenderness over the mastoid area, and inspection showed that the veins over the left side were apparently larger than those over the right. The one symptom which stood out prominently was pain in both eyes, but most marked on the left—the side of the discharging ear. The patient kept the left eye closed, although she did not complain of any visual disturbance or photophobia. The routine neurologic tests were all negative.

On March 27th, she was admitted to the hospital. Eye-ground examination was negative, urine negative, and blood count showed: erythrocytes 3,000,730, leukocytes 18,000, hemoglobin 60 per cent, small lymphocytes 11 per cent, large lymphocytes 2 per cent, polymorphonuclears 87 per cent. On March 28th the ear symptoms became worse, and we decided to perform a simple mastoid operation.

The clinical findings were profuse aural discharge, sagging of the posterior superior canal wall, increased tenderness over the mastoid area, and greater prominence of the veins over the left mastoid region than over the right. The x-ray showed the right side to be normal and of the mixed pneumatic type of cells. The left mastoid process throughout showed characteristic evidence of mastoid disease. The diffused, blurred, hazy appearance indicated an exudative process. The outlines of the peripheral cells and posterior and tip areas were completely absorbed. The bony walls of the central cells were still intact, but the general outlines were markedly blurred and hazy. A process of bone softening appeared to be taking place. The antral cells showed moderate evidence of osteitis. Nothing was brought out by the x-ray at this stage to point to an epidural abscess.

Operative findings: Periosteum thickened and adherent, mastoid cortex thick, mastoid cavity filled with granulation tissue which bled profusely. The mastoid cavity was about 1¼ inch in length, ¾ inch in depth, and ¾ inch in width. There was a dehiscence of the dural plate, and a perisinus abscess at the knee of the

lateral sinus. A gauze drain was inserted into the mastoid cavity, a few retention sutures were placed in the mastoid wound, and the patient returned to her room. There was a slight postoperative rise in temperature, with a proportionate increase in the pulse rate, both of which persisted for ten days.

On March 30th a slight weakness in the muscles of the left side of the face was noted. All packing was removed and the wound completely opened, and the next day these symptoms subsided. On April 4th the patient complained of severe pain in the left eye. Eye-ground examination was negative. The wound did not reveal anything of importance. All neurologic symptoms were negative. A caloric test with cold water (douching in the upright position) was negative. At no time was there any aphasia, cupping, or indentation in the visual field, so far as we could determine. The blood picture at this time was: Erythrocytes 3,190,000, leukocytes 14,750, hemoglobin 55 per cent, small lymphocytes 25 per cent, large lymphocytes 2 per cent, and polymorphonuclears 73 per cent. On April 3d a culture of the mastoid pus revealed Streptococcus hemolyticus.

On April 7th pain in the eye recurred. This lasted for several hours, but soon subsided. All neurologic examinations were negative. The eye-ground vessels were slightly smaller than normal, but the disk was not choked. At this time it was noted that the pulse was dropping, and within the next four days it dropped as low as 59 beats per minute. On April 12th the pain in the eye recurred, with a persistent headache which had to be controlled by the administration of codein. Eye grounds and all neurologic symptoms were negative. On April 16th, while dressing the wound, we found a small pus pocket at the mastoid tip which was cleansed, and the symptoms once again improved, although not entirely. On April 18th there was a smoothening on the right side of the cheek, and at the same time the left eye was completely closed. The headaches became excruciating, and were characterized by outbursts of cries at various intervals which could be controlled only by codein. Eye examination was negative, although the patient complained of photophobia in the left eye—which may explain her closing of this eye.

On April 20th spinal puncture was made, and only 3 c.c. of fluid drawn. This proved to be negative. On April 21st the blood picture was: erythrocytes 3,840,000, leukocytes 23,850, hemoglobin 65 per cent, small lymphocytes 32 per cent, large lymphocytes 3 per cent, and polymorphonuclears 65 per cent. April 22nd the patient complained of diplopia, with severe headache. A spinal puncture was again ordered, and the removal of only 5 c.c. requested. Through an error, 20 c.c. was removed. The spinal-fluid findings were negative. A peculiar phenomenon took place. All the symptoms subsided, the headache and pain in the eye disappeared, the pulse rose from 60 to 120 and remained high until May 3d. Eye-ground examinations were repeatedly made between April 22d and May 3d, and they were constantly negative. Spinal-fluid examinations on April 23d, May 3d, and May 5th were all negative.

On May 3d the patient awoke with severe pain in the eye, headache, and vomiting. The eye-ground, neurologic symptoms, and spinal fluid were negative. On May 7th the symptoms became alarming, and the pulse again dropped. Neurologic examination on this day revealed a positive Babinsky on the left side and a negative on the right. There was also rigidity of the neck. It was suggested that this might be a basal meningitis with a blocking of the ventricles. Ophthalmologic examination revealed a slight suspicion of optic neuritis in the left eye, evidenced by bulging forward of the nerve head (report of Dr. N. Fox). On May 8th the patient became irrational, constantly screaming, and some undue sensitiveness was noted over the left temporal region. Upon close examination, a small swelling over the left zygomatic region the size of a small nut was found. This swelling fluctuated, and was extremely tender to palpation.

On May 9th a decompression operation was performed. The King technic was followed closely. An incision was made over the swelling at the zygomatic region, and after removing the bone, an incision was made through the dura, when about two ounces of a foul creamy pus escaped. The patient gradually improved. The mental symptoms disappeared, and on May 12th the diplopia seemed to be clearing up. The right eye-ground was normal, and the edema of the left eye was decreased so that the nerve outline was again visible although the vessels were still congested. The media was clear. Blood examination showed: erythrocytes 19,400, small lymphocytes 32 per cent, large lymphocytes 5 per cent, polymorphonuclears 63 per cent.

On May 22d eye examination revealed diplopia with a paralysis of the external rectus. On May 30th the diplopia disappeared, and from then on the patient made an uneventful recovery.

An eye examination on October 11, 1926, showed that eye conditions were practically normal except that the left disk had a "muddy complexion, likely the result of a former inflammatory condition of the optic nerve."

The neurologic report on the same date is as follows: "Disks appear normal. There is no disturbance of fields of vision on gross examination. Pupils are somewhat dilated, but respond to light and distance. Left upper face normal. Left lower face slightly paretic. There is slight ataxia on left finger-and-nose test, and slight adiadokokinesis on left hand. There is hypersensitiveness over mastoid. Abnormally fearful and apprehensive. Definite findings: Paresis of left lower face and some cerebellar involvement—the remains of a meningitis."

Conclusions

1. Recurrent suppurative otitis media should always be kept in mind when a patient complains of indefinite headaches, as a dormant extra- or intradural abscess may be present and any acute exacerbation may cause a flaring up of the abscess.

2. At operation, careful search should be made for any dehiscences of the dural plate. I should also suggest, in cases with obscure symptoms, the removal of part of the dural plate, so that if an abscess is present it will be easier for it to wend its way towards the surface.

3. The lesson to be learned is to watch carefully and patiently until the time arrives that exploration will be simple, at the same time giving nature a chance to wall off the abscess without jeopardizing the patient's life.

I wish to take this means of thanking Drs. C. M. Coates, Benjamin Shuster, J. C. Yaskin, Frederick Hamlin, and C. W. Beals, for their assistance and coöperation in this case.

SARCOMA OF THE ETHMOID LABYRINTH

FREDERIC M. STROUSE, M.D.
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The patient, born in America of Italian parentage, was 26 years of age, unmarried, by occupation an ice man. His father died of penumonia at the age of 54. His mother was still living, aged 55, and complained of stomach trouble. Five living brothers were all in good health. One brother was killed in the war. His three sisters were living and in good health. He had no knowledge of his grandparents.

He was referred from Wills Eye Hospital to Dr. Skillern's service on June 23, 1926, and we are indebted to Dr. Lehrfeld of Dr. Chance's service for the following history of the ocular condition up to that time: The patient was admitted May 8, 1926, complaining of a swelling over the right eye and double vision for the past six months. The pupils were active, the fundi normal, vision 6/6 partly (equivalent to 20/20 partly)— nearly normal vision. There was manifest proptosis, paralysis of the internal rectus of the right eye, causing diplopia, and swelling at the inner canthus of the right eye. Owing to the persistence of these symptoms and increase of the swelling, which was considered to be a mucocele, an operation was performed on June 5th as follows: A puncture was made through the os planum of the ethmoid, securing a large amount of mucus of a dirty yellow color. The operator was unable to find a passage into the nose, but the patient claimed that he swallowed considerable mucus following the operation. A small drainage tube was inserted and retained for two weeks. The paralysis of the internal rectus completely recovered, but there was no recession of the proptosis; in fact, in time it became greater, together with passive congestion or hyperemia of the disk. In addition to the ocular manifestations, there was pain of moderate severity over the right frontal area, occasional sharp pain at the inner canthus of the right eye, mucopurulent discharge from the nose, cacosmia, and occasional slight epistaxis, but no dizziness, vertigo, or aural trouble. The duration of these symptoms was three to four months.

There was no clinical evidence of disease in the left naris, but examination of the right naris disclosed an irregular-shaped nonincapsulated mass occupying the middle-turbinate area. Manipulation with a cotton-tipped applicator was followed by a persistent epistaxis, necessitating packing for control. The teeth were apparently sound and well-cared-for, the tongue was clean, there were no scars anywhere, the tonsils were small and apparently negative, no pathology was evident in the epipharynx, oropharynx, or larynx, and the submaxillary and cervical lymphatics were not palpable. Transillumination of the frontal and maxillary sinuses was negative. Wassermann was negative. X-ray pictures taken early in May for Dr. Chance, showed the frontal, maxillary, and sphenoid sinuses clear, no evidence of ethmoid disease on the left, but the ethmoid cells of the right side appeared to be completely destroyed.

The provisional diagnosis was sarcoma of the ethmoid labyrinth. A section of the growth was sent to the laboratory, and Dr. Case reported round-cell sarcoma.

The patient was referred to Dr. Pfahler's clinic on July 2d, where he remained under the observation of Dr. Widmann. Fifteen doses of high-voltage x-rays were administered in almost daily treatments, always keeping within the erythema dose. From that time on, treatments were given at intervals of one and two weeks. The nodular swelling disappeared after fifteen doses. September 8th there was a recurrence of the nodular growth, which again disappeared by further radiation every two or three days. Roentgenograms showed no metastasis below the neck.

Dr. Lehrfeld further reported that on July 15th the right cornea measured 20 mm. compared to the normal 15 mm. of the left cornea. On July 21st the right cornea measured 18 mm. On October 5th the right eye measured 17 mm. in advance of the external canthus, with proptosis of 2 mm. The patient remained under observation to measure recession of the proptosis and watch the progress of the case, but the chances for ultimate recovery were believed to be against him.

PANSINUSITIS

NATHAN P. STAUFFER, M.D.
PHILADELPHIA, PA.

The occurrence of bilateral frontal and maxillary sinusitis is rare enough to warrant reporting the following two cases.

The first patient was a colored woman aged 25, referred to me with a diagnosis of maxillary sinusitis causing so much pain that she had been unable to sleep for weeks. She had the usual foul nasal discharge of a thick yellow pus which inspection revealed came from the region of the middle turbinate. The x-ray showed a cloudiness of both antra. Absence of pupillary reflexes was found on transillumination. Maxillary puncture brought forth the characteristic pus with its usual foul stench. After washing this out and placing the head in Escat's position, the pus still flowing, I concluded that the case was one of frontal sinusitis.

Accordingly, a modified Killian operation was done on the left frontal sinus, and a Caldwell-Luc on the right and left maxillary sinuses. The sinuses had pus and polypi in them, and were thoroughly curetted, and iodoform-gauze packing was introduced. Both eyes were swollen shut on the two following days, but since then there has been an uninterrupted recovery. Cessation of the terrible headaches came immediately after operation, and the patient has been free from them ever since. We are optimistic that she will ultimately be cured when the nose heals.

The second patient was a white woman, married, aged 44, who had been operated upon by two of the best rhinologists, and yet still suffered from headaches. She appeared at my clinic with a painful frontal sinus and a slight swelling over the eye which increased daily, and rapidly became so painful she could not sleep. Her previous troubles had destroyed the sight of her right eye (she attributed the loss of vision to the operation), and she was very much afraid of losing her remaining vision. The problem to be solved was: what gave her the continued headaches after two such radical frontal operations?

I irrigated her maxillary sinus on the left, and did not find any pus. She did have some involvement of the sphenoid, but evidently there was some deep-seated involvement of the frontal bone, as the eyelid was found to contain pus which had burrowed from the frontal sinus. Possibly the case would be diagnosed as an osteomyelitis, but if this were so, the right frontal bone probably would not have healed.

This patient presents a difficult problem, for she

is very severe in her criticism of her surgeons, not realizing what a difficult task she presents to her doctor.

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THE THERAPEUTIC VALUE OF LIGHT AND COLOR

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In the effort to obtain relief from suffering, many of the more simple but potent measures have been overlooked while we have grasped at the obscure and complicated.

Sunlight is the basic source of all life and energy upon earth. Deprive plant or animal life of light, and it soon shows the lack and ceases to develop. Place a seed in the very best of soil or a human being in a palace, shut out the light, and what happens? Without food (in the usual sense of the term) man can live many days; without liquids a much shorter time; but not at all without the atmosphere which surrounds him at all times and to which he pays so little attention. The forces on which life mostly depends are placed nearly or quite beyond personal control.

For centuries scientists have devoted untiring effort to discover means for the relief or cure of human ills and restoration of the normal functions. Yet in neglected light and color there is a potency far beyond that of drugs and serums.

In order that the whole body may function perfectly, each organ must be a hundred per cent perfect. When the spleen, the liver, or any other organ falls below normal, it simply means that the body laboratories have not provided the required materials with which to work, either because they are not functioning, as a result of some disorder of the internal mechanism, or because they have not been provided with the necessary materials. Before the body can appropriate the required elements, they must be separated from the waste matter. Each element gives off a characteristic color wave. The prevailing color wave of hydrogen is red, and that of oxygen is blue, and each element in turn gives off its own special color wave. Sunlight, as it is received by the body, is split into the prismatic colors and their combinations, as white light is split by passage through a prism. Everything on the red side of the spectrum is more or less stimulating, while the blue is sedative. There are many shades of each color, and each is produced by a little different wave length. Just as sound waves are tuned to each other and produce harmony or discords, so color waves may be tuned, and only so can they be depended on always to produce the same results.

If one requires a dose of castor oil, he does not go to a drug store and request a little portion from each bottle on the shelves. I see no virtue, then, in the use of the whole white light as a therapeutic measure when the different colors can give what is required without taxing the body to rid itself of that for which it has no use, and which may do more or less harm. If the body is sick it should be restored with the least possible effort. There is no more accurate or easier way than by giving the color representing the lacking elements, and the body will, through its radioactive forces, appropriate them and so restore the normal balance. Color is the simplest and most accurate therapeutic measure yet developed.

For about six years I have given close attention to the action of colors in restoring the body functions, and I am perfectly honest in saying that, after nearly thirty-seven years of active hospital and private practice in medicine and surgery, I can produce quicker and more accurate results with colors than with any or all other methods combined—and with less strain on the patient. In many cases, the functions have been restored after the classical remedies have failed. Of course, surgery is necessary in some cases, but results will be quicker and better if color is used before and after operation. Sprains, bruises, and traumata of all sorts respond to color as to no other treatment. Septic conditions yield, regardless of the specific organism. Cardiac lesions, asthma, hay fever, pneumonia, inflammatory conditions of the eyes, corneal ulcers, glaucoma, and cataracts are relieved by the treatment.

The treatment of carbuncles with color is easy compared to the classical methods. One woman with a carbuncle involving the back of the neck from mastoid to mastoid, and from occipital ridge to the first dorsal vertebra, came under color therapy after ten days of the very best of attention. From the first day of color application, no opiates, not even sedatives, were required. This patient was saved much suffering, and she has little scar.

The use of color in the treatment of burns is well worth investigation by every member of the profession. In such cases the burning sensation caused by the destructive forces may be counteracted in from twenty to thirty minutes, and it does not return. True burns are caused by the destructive action of the red side of the spectrum, hydrogen predominating. Apply oxygen by the use of the blue side of the spectrum, and much will be done to relieve the

nervous strain, the healing processes are rapid, and the resulting tissues soft and flexible.

In a very extensive burn in a child of eight years of age there was almost complete suppression of urine for more than 48 hours, with a temperature of 105 to 106 degrees. Fluids were forced to no effect, and a more hopeless case is seldom seen. Scarlet was applied just over the kidneys at a distance of eighteen inches for twenty minutes, all other areas being covered. Two hours after, the child voided eight ounces of urine.

In some unusual and extreme cases that had not responded to other treatment, normal functioning has been restored by color therapy. At present, therefore, I do not feel justified in refusing any case without a trial. Even in cases where death is inevitable, much comfort may be secured.

There is no question that light and color are important therapeutic media, and that their adoption will be of advantage to both the profession and the people.

PREGL'S SOLUTION IN THE TREATMENT OF ORGANIZED EXUDATE IN THE TISSUE OF THE EYE

ALICE V. MacKENZIE, M.D.
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Concerning the composition of Pregl's solution, it is claimed by its originator, Prof. Fritz Pregl, of the University of Graz, Austria, that it is a colloidal iodin solution, representing an aqueous soluble compound containing 0.035 to 0.4 per cent of free iodin and different iodin salts. It contains ions of sodium, free iodin hypoiodite ions, and iodate ions. This solution approaches the physical conditions of the tissues and the body fluids with regard to osmotic pressure.

From our experience in the treatment of tertiary syphilis and other granulomatous inflammations which tend to produce a superabundance of organized exudate, iodin, more often in the form of one of the iodids, is that particular remedy which approaches nearest to being a specific. It would seem, therefore, that iodin in fresh isotonic solution ought to be especially suited for these conditions.

Granting that the corneal opacities following interstitial keratitis clear up to a considerable extent spontaneously and even to a greater extent under stimulative treatment with hot applications, dionin, massage, high frequency, galvanism, subconjunctival injections of salt solution and of mercuric cyanid, etc., the results obtained with Pregl's solution, in our experience, surpass by far those obtained with any other agent previously attempted.

We have not limited its application to corneal scars. In fact, we have used it in every case of impairment of visual function due to the presence of an organized exudate, independent of its location or the character of the tissue involved. This particular report is limited to its use in a single case, selected because it presented the most severe test conditions of any that we have thus far treated by this method.

The case is that of a married man aged 64 years, a sculptor by profession. He had been under the care of a specialist for five weeks for an inflammation of the eye, supposed to be due to syphilis. The eye condition failing to improve, the patient was referred to us.

An examination of the case on February 18, 1925, netted the following findings: The soft tissue about the right eye was considerably swollen. There was blepharospasm with inversion of the lower lid. There was pronounced congestion of the conjunctiva, especially the bulbar. There was a slight amount of flocculent secretion in the lower cul-de-sac. There was a hazy opacity deep in the corneal substance, more dense in the central areas, and the surface of the cornea was generally dull, particularly over the infiltrated areas. The iris was congested, particularly in the region of the sphincter muscle. The pupil was small, irregularly triangular shaped. These findings of the iris and pupillary area required very close observation to determine the exactness of the findings, owing to the opacity and roughness of the cornea. An ophthalmoscopic examination was impossible, owing to the smallness of the pupil and the opacity of the cornea. The vision in the right eye was reduced to light perception.

There was no doubt as to the keratitis being of the interstitial type, for the infiltrations were deep and the vascularization though slight was deep, and the vessels were straight-running and unbranched. Furthermore, the cornea did not take the fluorescin stain, proving that the corneal epithelial layer was intact, in spite of the appearance of marked dullness, which proved to be nothing more than the evidence of pronounced edema. There was considerably more pain than is usually found in the syphilitic type of interstitial keratitis. The excessive pain could possibly have been accounted for by the associated iritis, for the intraocular tension was quite low to finger palpation, even in the presence of extensive posterior synechiæ. The exudative character of the iritis was evidenced by the extensive white, opaque pupillary membrane to which the pupillary margin of the iris was adherent almost throughout its entire circumference.

Because of these findings and the negative history of syphilis, the absence of other stigmata of syphilis, a negative Wassermann, the failure of the eye condition to improve under antiluetic treatment administered by the previous ophthalmologist, and the fact that the involvement was unilateral, led to the belief that the most probable etiologic factor was a focal infection. Since the teeth, the tonsils, and the nasal accessory sinuses are the most common sites for a focus of infection, they were naturally the first to be examined.

Several teeth presented x-ray evidence of periapical disease. The tonsils were found to be considerably enlarged, somewhat red, and the crypts contained cheesy

deposits. Since the patient's eye was at stake, it was decided to lose no time in ridding him of his infected teeth and tonsils. The only delay encountered was that wasted in persuading the exodontist to remove the condemned teeth and to do his work thoroughly.

After the removal of the last infected tooth and the tonsils, there followed a rapid (overnight) improvement in the patient's eye condition. From the subjective standpoint, he reported the following day that he had the best night's sleep which he had had for months, and that all pain had left the eye. Objectively, the eye showed less congestion, and he was able to hold it open; whereas before this, he had blepharospasm with entropion of the lower lid. All signs of inflammation cleared away in a day or two, and have not returned since.

Our obligation to the patient, however, was not ended; for, although the eye felt comfortable and was no longer inflamed, he was unable to see better than fingers at one foot. The next problem was how to make the patient see again. As a sculptor he was seriously handicapped, since unilateral vision does not permit one to estimate depth (third dimensions), which is so essential to one of his profession, except by parallaxing.

In an individual 64 years of age the chances of clearing up corneal opacities is far below what they are in younger people. Because of the favorable results obtained in the use of Pregl's solution in other cases, our thoughts naturally turned to it as the remedy of first choice. It was decided to use it in 50 per cent commercial strength subconjunctivally after anesthetizing the conjunctiva with 2 per cent butyn solution. One half c.c. of Pregl's solution was injected subconjunctivally in the region of the external rectus muscle. This was followed by some pain for several minutes after the first few injections. We have observed that the fresher the preparation and the stronger the solution, the more severe is the reaction pain. The patient was also given some of the solution to use at home with an eye dropper, t.i.d. The injections were repeated every three or four days for the first few weeks, when the eye condition showed signs of improvement. The interval between injections was gradually lengthened. After a few more weeks of this treatment there were unmistakable signs of further improvement, as evidenced by the vision; with glasses the patient read four letters on 6/20 line. The corneal opacity had decreased perceptibly. An additional factor contributing to the improvement in vision was some breaking away of the pupillary membrane in its upper part. The very tiny dark spot at the upper edge of the pupillary membrane had grown larger and blacker.

Our earliest observations of the pupillary area were hindered by the corneal opacity, which did not permit of good visibility of this area. For this reason we were forced to make our observations obliquely through a narrow strip of the more transparent part of the cornea near the periphery, using strong focal illumination and a ten-power Zeiss magnifying loupe. There was some slight doubt as to just how much of this first improvement in vision was due to clearing up of the corneal opacity and how much to breaking away of the pupillary membrane.

Encouraged by the improvement in vision and the appearance of the little clear black spot in the upper part of the pupillary area, we pushed the atropin to its physiologic limits. Our failure to break up the adhesions under this form of treatment was just as complete as were our previous efforts when the patient first reported for treatment. Notwithstanding, the subconjunctival injections of Pregl's solution were continued for several months, the patient reporting weekly. On these occasions, his usual report was "I am seeing a little better all the time." Finally he reported that he "could see fine; practically as good as with the other eye." At this visit the cornea was so far cleared up that one could detect but the slightest haze with difficulty, and only under strong focal illumination. At this same time the pupillary membrane appeared less dense, and was freed from the upper pupillary margin for an area equal to about 120°. A dark clear spot was evident, equal in volume to about one-fourth of the total pupillary area. On May 1, 1926, the patient was refracted, and with a correcting glass (—1.12⌒—1.62 Ax. 126°) his vision for the right eye was 6/7½ as compared to light perception only on his first visit.

PALSY OF THE INFERIOR OBLIQUE MUSCLE

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Mrs. T. B., aged 64, lace crocheter, was referred to me November 5, 1924, for a new refraction.

She had been wearing glasses for twenty-six years, and the pair worn was prescribed about eight years previously. She complained of poor vision, headaches, some vertigo, and general poor health. She was aware of a drooping of the left lid and some peculiarity of the left eye. She did not recall ever having diplopia, and could give no idea as to the time of onset of the eye-muscle conditions present. Clinical investigations by Drs. Pfromm and Asnis threw no light on the etiology. Station, gait, and knee jerks were all normal. The Wassermann reaction was negative. Urinalysis showed nothing of significance. There was a moderate anemia present. Vision: right eye, 20/100 minus, which could be corrected to 20/30 plus, with $+1.50^{s}=+075^{c}$ ax 15°; left eye, 20/100 minus, which could be corrected to 20/30 plus with $+1.00^{s}=+0.75^{c}$ ax 165°.

The arcus senilis was distinct. The pupils measured 3½ mm. in moderate illumination, and reacted promptly to light, in convergence, and consensually. The left palpebral fissure was the narrower by 2 mm., but there was no real ptosis. The patient carried her head inclined somewhat toward the left shoulder. She fixed with the right eye. The left eye, as measured by perimeter, was deviated inward 12 degrees and downward 35 degrees. The right eye made an enormous excursion upward under cover as the left eye was made to fix (secondary deviation), and the right eye returned to its primary position on being uncovered. The rotations of the right eye were free in all directions. There was limitation of movement of the left eye upward as well as upward and outward.

With the perimeter, it was found that the limits of rotation of the eyes were as follows: Upward, right eye, 50 degrees, left eye, 40 degrees; downward, right eye, 65 degrees, left eye, 65 degrees; outward, right eye, 48 degrees, left eye, 45 degrees; inward, right eye, 60 degrees, left eye, 53 degrees.

False projection with either eye covered or both eyes uncovered could be elicited, but was not very well marked.

It was not possible, even with high-degree prisms favorable to the strabismus, to elicit diplopia. One image seemed to be completely suppressed.

With the ophthalmoscope, the right eye showed a dulling of the red reflex, due to a general lenticular haze, the fundus was well seen, vascular relations were normal, disk and retina were somewhat pale, and there were no lesions. The left eye presented similar conditions.

From the position of the left eye, down and in, the limitation of movement up and out, the false projection, the position of the head, and the secondary deviation of the right eye, the diagnosis made was paralysis of the left inferior oblique muscle.

Inasmuch as the time of onset and the etiology of the eye-muscle disturbance were veiled in obscurity, the treatment was shrewdly empirical. It consisted of careful correction of the refractive error and treatment of the anemia. To these were added repeated courses of iodid of potassium to the point of tolerance, and the prescription for the headache of pills containing 1/4 gr. of protiodid of mercury to be taken three times daily. The consistent adherence to this régime for the past two years has made the patient entirely comfortable, and has improved her general health. It has had no effect upon the deviation of the left eye.

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FRONTAL SINUSITIS RESULTING IN RETROBULBAR NEURITIS

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Retrobulbar neuritis is frequently due to involvement of the posterior ethmoid or sphenoid sinuses, but is rarely seen in frontal or maxillary sinusitis. In the two cases herein reported, the frontal sinuses were very large, and extended well back over the orbit, where they were in close proximity to the optic nerve. In one case the maxillary sinus was also involved, but the posterior sinuses were unaffected in either case. Brief histories are as follows:

Mr. S., a bookkeeper, worked very late one night over his books. The next day, April 17th, he noted blurring of vision in the left eye. On April 21st he consulted his oculist, Dr. Deichler. His history showed excessive use of tobacco for years. He also stated, after direct questioning, that he had had a marked unilateral discharge of thick yellow pus from the left nostril all winter. It had stopped "less than a month" before the eye was affected. He was subject to frontal headaches all his life, but had had none since his eye became affected. Examination showed negative eye grounds, greatly contracted fields and a marked lowering of vision in the left eye to 15/200. X-rays by Dr. Steinmetz showed no intracranial or sinus involvement. Two abscessed teeth were discovered and extracted. The Wassermann was negative.

On May 6th the patient was referred to me. X-rays by Dr. Zulick, transillumination, and physical examination showed no pathology in the nose. The vision had improved to 15/70, but in view of the history of profuse discharge from the nose stopping shortly before the onset of impaired vision, we decided to operate at once. Knowing that the posterior sinuses are most often involved, I cleaned out the left posterior ethmoids and opened the left sphenoid sinus in spite of the lack of any evidence of sinusitis. They were normal. The vision improved quite a little after this operation from 15/70 to 15/40. There was pallor of the deeper layer of the nerve, and a low-grade neuroretinitis was present. The right eye showed some contraction of the color field and a relative scotoma for green.

On May 16th he was seized with a severe left frontal headache, and pus was noted coming from the frontal sinus. It was opened intranasally on June 13th, and the headache was relieved following a free discharge of pus, but the vision did not clear up satisfactorily. Transillumination now showed marked dullness over the left frontal sinus. We then did a modified radical frontal-sinus operation (Knapp) on June 24th, and found plenty of pus and polyps. In 48 hours the patient could again distinguish colors and the vision progressed rapidly. On July 3d it was 15/15 in the left eye, and color sense was improving.

The second patient had a profuse discharge from the nose for three years, but paid no attention to it. He was seized with a severe right frontal headache on Monday. On Wednesday he thought his eyesight might be the cause of his pain and consulted his oculist, who told him to see a rhinologist. That evening his vision began to blur. On Thursday he saw his family physician, who referred him to me. Friday he became blind, and on Saturday he consulted me. He was totally blind in the right eye, could just perceive light, but not the direction it came from, with the left eye, and had an almost complete external ophthalmoplegia. He was unable to move either eye on command, but occasionally the left eye would move inward. Transillumination, x-ray and intranasal examination showed an advanced case of purulent maxillary and frontal sinusitis on the right side. The eye grounds were negative. A considerable amount of pus was immediately washed from the maxillary sinus. The same evening, I did a radical frontal and maxillary sinus operation (Knapp and Caldwell-Luc), finding great quantities of pus and polyps in both sinuses. Seven and a half hours after the operation, the patient could count fingers. His vision continued to improve rapidly until he reached normal, and has remained so since.

The frequency with which posterior ethmoidal and sphenoidal sinusitis is the cause of retrobulbar neuritis has led to the dictum that, given a case in which no other foci are apparent after a brief examination, operation should be done at once, rather than to make a protracted search for the cause, during which time the sight may be permanently lost. Cases are reported in which an apparently normal sinus proved to be diseased. In some no disease was found at operation, but pus noted on subsequent days was taken as an evidence that a dormant focus had been uncovered. Although no microscopic examination of the tissue was made in our cases, I feel confident that the posterior sinuses were normal in both. To what, then, shall we attribute the improvement that followed operation in the first case on the normal sinuses? An abscessed tooth had been extracted. This factor for improvement may have continued after the operation. However, the improvement seemed to be accelerated by the operation.

The following points may be considered in an effort to explain it: (1) Depletion in an area

adjacent to the optic nerve. (2) Local reaction to operation, with leukocytosis and improved blood supply to the optic nerve. (3) Proteolysis which occurs in the crushing and fragmentation of the ethmoid cells may cause a reaction similar to that seen after the injection of proteins or vaccines, as suggested by Dr. C. Berens.

You will note, in the first case, that the eye became involved after the sinusitis abated. The cessation of discharge from the nose was not an evidence of pent-up secretion. There was no headache, and all examinations of the sinuses were negative. Surely if such a large sinus were full of pus it could have been easily demonstrated. Probably the process in the frontal sinus at the time of our operation on the posterior sinuses, was active only in the depths of the large frontal sinus, where it would more likely affect the optic nerve, yet not be readily discovered. Although the primary treatment of this case resulted in improvement, it was only after the radical frontal operation that a cure was obtained. This indicates that we were dealing with an actual toxemia of the nerve or possibly a definite neuritis.

The paths of direct extension from the sinuses to the optic nerves are: (1) From the veins of the sinus wall to the vein of Vossius, (2) through the lymphatics, (3) by prolongation of fibrous extensions of the sinus walls into the dural coverings about the nerve, (4) by extension of inflammation directly into the arachnoid space, (5) by dehiscences in the sinus walls.

In the second case, the eye involvement was bilateral, and the frontal sinus was the same large type as seen in the first case, well back over the orbit to the optic nerve. In this case, the optic nerve involvement was probably due to an actual pressure caused by edema. Otherwise, this improvement could hardly have been so marked within a few hours after operation. It would appear that there was no real toxemia of the nerve, nor inflammatory involvement. We did not test the patient's eyes until seven and one-half hours after operation, when we found sight returning. Dr. George Wood tells me that he had a case in which simple cocainization of the turbinates caused immediate improvement of vision in a case of retrobulbar neuritis. Recently I had a case of the same affection in which I removed some badly diseased tonsils under local anesthesia. The patient declared immediately that he could see better. His vision is improving, but is not yet normal. He may have deceived himself, but on the other hand, may we not attribute the condition to depletion?

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PURPURA HEMORRHAGICA*†

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Following are reports of two cases of purpura hemorrhagica, one treated by splenectomy plus whole-blood transfusions, the other by whole-blood transfusion alone.

The first case, that of a boy aged 7, is presented through the courtesy of Prof. Edward L. Bauer. Russell ———— was admitted to the hospital on June 1, 1926, suffering from profuse hemorrhage of the mouth and nasal mucous membranes. On the lower extremities there were many ecchymotic and petechial spots. The spleen was palpable. The hemoglobin was 14 per cent; red cells 1,230,000; platelets 46,000; bleeding time 6 minutes, 30 seconds; clotting time 4 minutes, 20 seconds; fragility of the red blood cells normal; and the Hess capillary resistance test positive.

There was some difficulty in finding a donor, but on June 12th a transfusion of 160 c.c. of whole blood was given. Four days later he received a similar amount. The red cells and hemoglobin increased until June 28th, when they were well within normal limits. The blood platelets were 600,000. Dr. Arthur Billings performed a splenectomy on this date, and found the spleen enlarged and somewhat adherent. The boy experienced the usual stormy course, but the blood count varied but little from normal. Platelet counts were made daily. The day after the splenectomy there was a sharp drop, but the next day they rose to 1,300,000. The platelets continued at this high level with some variation until the 11th day, when they dropped to 220,000. Following this there was another rise, but gradually the platelet count reached a normal level of 400,000. At present the blood count is 90 per cent hemoglobin; 5,000,000 red blood cells; 12,500 white blood cells; and 440,000 platelets. It is approximately five months since there have been any hemorrhagic symptoms; and he has not shown anything that would make one suspicious of purpura.

Evelyn ———— is eight years of age and has had some rather trying experiences. In September, 1925, she suffered a severe attack of epistaxis and vomited what is said to have been two quarts of blood. She was admitted to one of the hospitals in the city, and remained there three weeks, during which time she had two more attacks of nosebleed. Two attempts were made to administer blood by the citrate method.

*Abstract of paper presented at the clinical meeting of the Section on Medicine of the Medical Society of the State of Pennsylvania, held at the Philadelphia General Hospital, October 13, 1926.

†From the Jefferson Hospital.

After leaving this institution she experienced a nosebleed every few weeks, accompanied by the presence of petechiæ and ecchymoses. March 1, 1926, she had an unusually severe nosebleed, followed by the appearance of multiple ecchymotic spots in the mucous membrane of the mouth and tongue. These turned black, and the dark liquid ran from her mouth.

April 3rd she was admitted to Jefferson Hospital. She had another severe nosebleed that morning. Five days after admission, during which time she had several attacks of epistaxis, the hemoglobin was 56 per cent, the red cells 2,940,000; blood platelets 12,000; bleeding time 6 minutes, 30 seconds; clotting time 3 minutes, 25 seconds; capillary-resistance test slightly positive; and the fragility test normal. The spleen was palpable. Four transfusions of whole blood were given at four- to five-day intervals in amounts varying from 160 to 120 c.c. The blood count rose steadily until April 26th, when the hemoglobin was 80 per cent; red blood cells 4,200,000; platelets 100,000.

At present, the hemoglobin is 90 per cent; red blood cells 4,700,000; platelets 260,000; bleeding time and coagulation time normal. The spleen is not palpable. She has been perfectly well ever since she was discharged from the hospital six months ago.

A controversy must arise as to the method of choice in treating purpura hemorrhagica. Splenectomy produces more striking and quicker results, but it is a major surgical operation, and is attended by a certain mortality. Some of the patients refuse operation when they begin to improve, and certainly if they do not improve it is unwise or dangerous to operate.

We still do not have enough accurate knowledge concerning the functions of the spleen. Krumbhaar has emphasized several important splenic functions, especially the relation of the spleen to immunity; and accordingly one must question splenectomy as a justifiable measure, particularly in a child.

The rôle of transfusion in purpura hemorrhagica is: first, as a life-saving measure; second, to prepare patients for the operation of splenectomy; third, to bring the blood elements to a normal point in those patients who refuse operation. Six of our patients were treated by transfusion alone. At present five are living and in good health. One patient received the last transfusion four years ago.

In order that good results may be had with transfusion alone it is important to use whole blood and not citrated blood, because with the citrate method the platelets are injured. The blood should be given at three- to five-day intervals. The patients must be kept under observation. Laboratory studies should be made at frequent intervals, and if petechiæ, ecchymoses, epistaxis, prolongation in bleeding time, marked reduction in platelets, or marked reduction in other blood elements occur, treatment must be instituted at once.

TRAUMATIC INJURIES OF THE FOOT AS RELATED TO BITUMINOUS COAL MINING*

WILLIAM E. DODD, M.D.
ROSSITER, PA.

Perhaps in no other line of industrial work are traumatic injuries of the foot more common than in bituminous coal mining, where fragments of roof or coal frequently fall in spite of all possible precautions. The leg and foot are particularly subjected to injury in mining "low coal," where it is impossible for a man to stand upright and he must therefore work in a crouched or kneeling position, thus leaving one or both feet unprotected by the upper part of his body from falling matter.

Statistics

This paper is based upon the analysis of 1,000 accident cases which have recently come under our care. Of this number, 191 (or 19 per cent) involved the leg, ankle, or foot. This means that approximately one out of every five men injured in or about the mines receives his injury below the knee. If we take the foot proper, without considering the ankle joint, this percentage is cut nearly in half, and we have 11 per cent instead of 19 per cent. In the April, 1925, issue of *Surgery, Gynecology, and Obstetrics,* Dr. Leo Dretzka, of Detroit, Michigan, published an article on "Fractures of the Foot,"[1] and showed that such fractures constituted 2.9 per cent of his series of cases. Our statistics are similar. We have found that in 2.5 per cent of our cases, fractures of the bones of the foot were present. The remaining 8½ per cent consisted of lacerations, puncture wounds (usually inflicted by the point of a pick), and contusions which range from slight bruises to severe crushing injuries.

Lacerations

Lacerations of the foot occurring in the mines are not essentially different from the majority of those occurring elsewhere in civil life, yet there are a few points of difference to be borne in mind. Simple uncomplicated lacerations are

*Read before the Jefferson County Medical Society.

rare. There is always more or less contusion of the surrounding parts which tends to interfere, to some extent at least, with the blood supply to the lacerated tissues. This contusion may amount to actual devitalization of tissue in and about the wound, which, if left *in situ,* will interfere with rapid healing, and predispose it to infection. Furthermore, the injury, besides producing a laceration of the skin and subcutaneous tissues, is usually severe enough to damage deeper and more important structures, such as tendons, bones, and ligaments.

In any infected wound it is well to ask ourselves where the infecting organisms come from. If cultures are taken from the coal and overlying rock any place except within a few yards of the drift mouth, they will usually show no growth. If a growth is obtained (as often happens when the material cultured is wet from water which has percolated through from above) the organisms are invariably found to be of the harmless saprophytic variety. This means that so far as infection is concerned the coal and rock are not sources of danger. Contrary to the popular belief of the miners, the so-called "sulphur water" of the mines is also harmless. In fact, it is mildly antiseptic. In "drawing stumps" it sometimes happens that men work in a vicinity where miners have deposited their feces years before. The material has long since dried up and is inoffensive, but coal dirt on the "bottom" of such places may be highly infective if rubbed into a wound. On the whole, however, the surroundings inside the mines harbor bacteria to a less extent than do the cleanest workshops on the outside.

On the other hand, the skin covering the perspiring feet of the workmen, encased, in the vast majority of instances, in the rubber mine shoes, are reeking with pyogenic organisms. The Staphylococcus pyogenes is most frequently present, although streptococci, colon bacilli, and others are also encountered. Therefore, we must consider every laceration of the foot as inoculated with pyogenic organisms, and that infection is likely to occur if means are not taken to prevent it.

Treatment

As to the manner of treating uncomplicated lacerations, there are perhaps as many good methods as there are efficient antiseptics. The immediate application of tincture of iodin or other antiseptics in the hands of the workmen has been disappointing, mainly, I believe, because of the ignorant way in which it is usually applied, and also because of the not infrequent occurrence of severe dermatitis resulting from application of tincture of iodin to perspiring or moist skin. We prefer that the wound be covered with a sterile dressing, and that the workman report at once to the office for treatment.

The following plan of treatment has been satisfactory in our hands: The wound is protected with a sterile piece of gauze, and the surrounding parts cleansed with a tincture of green soap, or equal parts of tincture of green soap and peroxid. If, for any reason, the parts are soiled with grease, this is removed at first with benzine or ether. If the laceration is extensive, the area is anesthetized by local injection with 1-per-cent novocain. Under aseptic precautions, the wound is explored, and pieces of coal or other dirt as well as devitalized tissue are removed. Severed tendons are immediately sutured, using fine chromic catgut. The wound is swabbed out with a 5-per-cent aqueous solution of mercurochrome, and may be partially closed, although one angle of the wound is left open and a strip of rubber dam inserted to its depths for drainage. The part is immobilized with a molded plaster splint. If the laceration is not extensive, local anesthesia is not employed. Foreign bodies are removed, and the wound treated with mercurochrome or a wet dressing of 1 to 1000 solution of chinosol. In no case should a laceration of the foot be sewed up tight without first thoroughly exploring the wound, enlarging it if necessary, and removing all foreign bodies and devitalized tissue. Even then, the better plan is to leave the wound open, and to treat it with continued wet dressings of chinosol for a few days, when a delayed closure can usually be made with safety.

Infection

If infection occurs, a thorough understanding of the anatomy of the foot is essential, as is a similar understanding in the treatment of infections of the hand. As in the case of the hand, infections of the dorsum are less serious than those of the opposite aspect. Infection may gain entrance to and travel along the tendon sheaths of the Tibialis anticus, the Extensor hallucis, the Extensor longus digitorum, or the Peroneus tertius. It may further extend upward beneath the anterior annular ligament into the leg. These tendons are superficial, and are easily reached by incision to establish drainage. In all cases of infection of the tendon sheaths, early immobilization is of great importance. A mounded plaster splint does this very well, and at the same time gives free access to the infected area for local treatment.

In counterdistinction to the thin skin of the dorsum, that of the sole is thick and unyielding. Subcutaneous infection may burrow beneath it

along the under surface of the plantar fascia, and because of the unyielding character of the tissue, pain is severe. If infection is carried beneath the plantar fascia, as in a perforated injury, some importance is attached to whether or not the Flexor brevis digitorum muscle is perforated. If not, the pus collects between this muscle and the plantar fascia, and a superficial plantar abscess results. As the collection becomes more and more extensive, it may point, as described by G. G. Davis,[2] between the tendons at the webs of the toes, or at the outer side of the sole between the Flexor brevis and the Abductor minimi digiti, or at the inner side between the Flexor brevis and the Abductor hallucis, or it may burrow through gaps in the fascia in the central part of the sole.

If, however, infection traverses the Flexor brevis muscle, it gains access to the tendons of the deep flexors and may spread along them up into the leg. In doing this it passes up behind the inner malleolus, where it may point. If an incision is attempted at this point, care should be taken not to injure the posterior tibial nerve, the posterior tibial artery, and accompanying veins.

The treatment of these infections is early free incision long before fluctuation occurs. If this is practiced, such extension of infection along the tendon sheaths as has just been described can nearly always be prevented, and the point at which pus burrows to the surface becomes of less interest to us. Just as we avoid extensive incision into the palm of the hand, so we should avoid extensive incision into the sole of the foot, particularly in the weight-bearing areas. If incisions are made into these areas, tender scars result after infection has been controlled, and disability is prolonged. Infection, whether beneath the plantar fascia or not, is best reached by going in laterally, or by incision in the hollow of the instep in the direction of fibers of the plantar fascia. If deep incision is made through the instep, care should be taken not to injure the internal plantar artery and nerve, which lie to the median side of the Flexor hallucis. This can be done by using the blunt point of a hemostat for exploration after the plantar fascia has been incised. In cases of collections between the Flexor brevis and the plantar fascia these structures are pushed out of danger by inflammatory swelling, but in cases of deep plantar abscess (that is, beneath the Flexor brevis) care should be exercised. If either the internal or external plantar artery is injured, bleeding should be controlled by packing the wound rather than by attempting ligation, because rarely can the artery be grasped with a hemostat without danger of grasping also the accompanying nerve.

If it is decided to reach the infection through an incision to the outer side of the sole, it can be approached either anterior to the prominent base of the fifth metatarsal, or just back of it. The incision should not extend over it, however, for this is a weight-bearing prominence, and the plantar spaces cannot be reached at this point without carrying the avenue of approach over it to its mesial side. If this is done, a painful prominence results. In making incisions to the outer side of the sole, the external plantar artery and nerve, which lie in the groove to the outer side and beneath the Flexor brevis muscle, must be borne in mind.

Tetanus and Gas Gangrene

Since electric motors have done away with the presence of mules and ponies in the mines, tetanus is extremely rare. We have not had a case of tetanus in this series.

We have recently had one case of gas-bacillus infection, however. This occurred in a case of extensive mutilation following an explosion. Although not proved, we think it possible that the Bacillus aërogenes capsulatus might have been present in the infusorial earth employed in the manufacture of a form of explosive which was in use when the accident occurred.

Severe Contusion and Crushing

In the majority of these cases, fortunately, the skin is not broken. They vary in severity from multiple comminuted fractures with extensive ligamentous injuries to what might be considered a slight sprain or bruise. In all the cases, the keynote to treatment is to restore the supporting framework of the foot to as nearly a normal shape as possible, at as early a date as possible, and to apply a suitable dressing to hold it in that shape.

Upon what shall we focus the spotlight of our attention? Upon the arch of the foot. Dretzka says: "The keynote of the entire anatomy of the leg is the arch of the foot, as a sound leg is obviously of no use when the foot is disabled. In primitive man, and in the case of the laborer of today, a disabled foot means an absolutely helpless person." Instead of the term "arch of the foot," however, "arches" would be more correct, for there are more than one. The inner longitudinal arch is the highest and most important, although the outer longitudinal arch and the transverse arch must not be forgotten. What preserves these arches? One factor is the tone of the muscles which send their tendons

down back to the internal malleolus and span the longitudinal arches. The strong plantar fascia attached to the calcaneum and passing forward in a fan-shaped manner does its part. Last, but not least, the strong intrinsic ligaments of the foot, especially the long and short plantar ligaments, combine with the factors previously mentioned to support the bony arches.

When the arch breaks, it is not merely the bones of the tarsus or metatarsus that break, but also the strong bands of connective tissue which hold the bones in place. The bones are often injured as well, but they are of secondary importance only. We have been paying too much attention to bone injury, and not enough to ligamentous injury. We have been giving too much consideration to those things which the x-ray shows us, and not enough to that which our common sense should tell us is the real crippling factor. It is not my purpose to hold up the x-ray to criticism, nor to recommend that it should not be used to its fullest extent in every case; it is ourselves whom I criticize. We are following too much the lines of least resistance. Modern engineering has given us the automobile and the aëroplane, but is that any excuse why we should forget how to walk? Modern science has given us the x-ray and an endless list of laboratory tests, but does that excuse us for forgetting our anatomy, the very foundation stone of all medical knowledge. Too often we have said to a patient, "The x-ray shows that no bones are broken; you are all right," when he is not all right, and is not going to be all right.

When a ligament is torn it may separate from the bone at one end, or even carry a shell of bone and periosteum with it. In this case we really have a fracture with wide separation of the fragments. It may tear somewhere along its length. In either case, if the repair process is allowed to take its own course without the ends being approximated to some degree at least, the result is going to be the lengthening of that ligament. It is then like a sagging guy wire, and is useless in supporting the bones of the arches until they have fallen to such a level that the ligament is again made tight. When an arch falls, the weight is not borne evenly by the whole articular surface, as it formerly was, but is shifted to the superior edges of the articular facets, while the lower part of these surfaces tends to gap. This is the condition of an unstable arch and a painful foot. As time goes on, the bones themselves will become altered in shape, so that the weight bearing will be distributed more evenly over their articulating surfaces, and while deformity may be more marked, pain and disability become less.

Once more let me emphasize the need of correcting the deformity early by the free use of molded plaster splints. Be sure that the arches of the foot are restored. Even overcorrect them; for often in spite of the best efforts at correction you may be disappointed after the removal of the dressings to find that the arch still tends to sag. In correcting the longitudinal arches, the aim should be to draw the ball of the foot and the heel closer together while support is made under the tubercle of the scaphoid, rather than merely to exert pressure in the hollow of the instep.

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WASHINGTON SESSION OF A. M. A.*

Judging from responses to requests for hotel reservations and other sources of information, it is evident that the members of the American Medical Association look with favor upon the choice of our national capital as the place for holding the 1927 session of the Association. It is pleasing to note that all of the members elected to represent our Society in the House of Delegates have signified their intention of serving. The approach to the City of Washington from all points in Pennsylvania is attractive, and particularly so to the motorist, and we are confident from advance notices, as well as from experience at former sessions, that all our members in attendance will receive both pleasure and profit.

UNION COUNTY'S LOSS*

Our Society has sustained a great loss through the death of Dr. Charles A. Gundy of Lewisburg. Dr. Gundy served the Union County Medical Society as secretary from the time of its organization in 1910, and had just completed a particularly good piece of work in reviving the interest of the thirteen members of that society. Physicians residing in populous counties have but little conception of the difficulties confronting the officers of a medical society in a county where doctors and good roads are few and far between.

Every member in our State Society is an important member of his own community, where by his ability and work he attracts responsibilities and obligations, in continuous procession, which he finds difficult to lay aside.

*Omitted by error from the Secretary's Department, page 455.



HOTEL SCHENLEY.
Headquarters for the Pittsburgh Meeting.

Pittsburgh—Scene of the 1927 Session

Fred M. Jacob, M.D.
Secretary of the Committee on Arrangements

Pittsburgh, which enjoys the privilege of the annual meeting of the Medical Society of the State of Pennsylvania this year, has many interesting aspects, medical and otherwise, for the visiting physician. Located at the junction of two rivers, the Allegheny and the Monongahela, which join to form the Ohio, it was, in its early days, from a commercial and transportation standpoint, the gateway to the west. The same condition made it of some military importance, so that the early history of the town is rather warlike and quite interesting.

Scenically it has a beauty which is very characteristic, being placed in a hilly country so that the city and surrounding districts contain many beautiful spots. During clear weather, the outlines of the hills and the magnificent distances which can be commanded from the summits, are very inspiring. Due to both climatic and industrial conditions, there are many gray and smoky, misty days, which add shadows, giving the hills and rivers a subtle beauty which in part repays one for chancing the various respiratory diseases prevalent in a district where the lungs are always anthracotic.



THE CATHEDRAL OF LEARNING.
Located in the heart of the Schenley Farms District, ground for which was broken in 1926. (Courtesy of the University of Pittsburgh.)

The major portion of the business district is located in the so-called "Golden Triangle" situated between the two rivers, and is a most imposing sight from some of the hills across the rivers.

Ascending the hills are numbers of inclined planes for both passengers and vehicles. These cable-drawn cars are made necessary in places on account of the abrupt slopes of some of the hills. A



THE UNIVERSITY CLUB.
Where some of the meetings will be held during the Pittsburgh Session.

ride in one is a unique experience to people from more level districts, and the wonderful view of the city obtained from the top makes the trip worth while.

Near the "Point," the junction of the two rivers, is the district where the first settlers located. This has been the site of several fortifications commanded at various times by French, English, and Americans. On Penn Avenue, near the point, still stands a very interesting small brick building known as the Block House, which is a remnant of Fort Duquesne, a French fort at which Washington was once a visitor. This fort was taken by General Forbes after the defeats of Braddock and Grant by the French and Indians. Forbes renamed it Fort Pitt, and the settlement Pittsboro in honor of William Pitt, the English Prime Minister. The Pittsburgh district later on was the seat of the "Whiskey Insurrection," which followed the Revolutionary War, being an uprising of the people of the district in protest against the excise tax on whiskey. *"Sic transit gloria mundi."* There are no insurrections to-day.

Owing to the surrounding rivers, as well as the valleys and hills, Pittsburgh has more steel bridges than any other city in the world, there being more than a dozen under construction at the present time. Several of the hills have been pierced by vehicular tunnels, which are convenient and interesting structures. One pair in particular through one of the South Hills, was watched with interest by many parts of the country, since, on account of its length, and use by motor cars, the ventilation was a very difficult engineering problem.

The mills which stand along the banks of the rivers for miles, need no mention, as they are Pittsburgh's most famous asset.

In all parts of the city are located parks of various sizes, containing many facilities and amusements.

The Allegheny County Medical Society was founded April 20, 1865, in Pittsburgh by a group of doctors whose names appear in a repro-



WEBSTER HALL, FIFTH AVENUE AT DITHRIDGE STREET.
Residence hotel for men near the headquarters for the State Society Meeting. Affords a large gymnasium and swimming pool.

duction of the minutes of the first meeting. About fifteen years before, a society of the same name had been organized; was extant for some five years, and after falling into an inactive state, was never reorganized. The present organization has been active continuously since its first meeting, and being composed of all the representative men of the county, stands as the parent medical organization of the district. Its entire membership extends a hearty welcome to the other members of the State Society.

The meetings are to be held in the Schenley Hotel and the University Club. These buildings are within a short distance in the Schenley Farms district. The district is one of the finest of which any city can boast. In one relatively small area are the University of Pittsburgh, Carnegie Technical Schools, Schenley Park, Carnegie Museum and Library, Forbes Field, the Soldiers and Sailors Memorial, the Masonic Temple, several of the leading clubs, and many other imposing buildings. The University of Pittsburgh for some years has occupied a number of buildings placed at various heights on the hills above this district. At the present time, excavations are being made for a magnificent building of great height which is to house most of the University activities. A short distance away the medical center has been started with the New Children's Hospital as the first building of a wonderful group for the future. Just behind this plot is the University Stadium, the center of the athletic activities of the University. In Schenley Park is a beautiful group of buildings housing Carnegie Technical Schools.

Hotel Schenley is one of the older Hotels of Pittsburgh and well suited for a meeting place. Webster Hall is a recently completed apartment hotel which has many advantages. The University Club is one of our best clubs. Next to the University Club is the Physician's Building, a six-story office building owned entirely by the physicians whose offices are located there. This is a fine example of what can be accomplished by a group of physicians in making offices to suit themselves and their needs.

A record attendance is expected at this meeting, and all who plan to be present are urged to make their reservations promptly. All requests should be addressed to Dr. I. H. Alexander, Chairman of the Committee on Hotels, Jenkins Building, Pittsburgh, Pa.

SESSION NOTES

One of the attractive features of the meeting is the exhibits. These will be located in the ballroom on the first floor of the Hotel Schenley, together with the registration bureaus for Society and Auxiliary. Plans are being made to present practical demonstrations at the Scientific Exhibit, and each scientific section has pledged itself to be responsible for one demonstration.

The prospectus for the Technical Exhibit has been out about a week, and already more than half the available space has been reserved. A number of new instruments and medical preparations will be demonstrated, as well as recently developed apparatus. An hour or two in this exhibit will be well spent.



UNIVERSITY OF PITTSBURGH SCHOOL OF MEDICINE.
(Courtesy of the University.)

When you arrive at the meeting, the first thing to do is to REGISTER and get your membership button. This will entitle you to admission to the University Club, where a number of the meetings will be held, and lunch and dinner will be served daily. It will entitle you to free parking space and many other privileges. Tickets for all social events will be obtainable only at the registration bureau. Be sure to register first.

Don't miss this meeting—come early and stay late.

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Editorials

CHILD HEALTH DAY

The World War brought about an opportunity for the United States to make a nation-wide study of the physical and mental fitness of its young manhood. The findings were so appalling that interest was immediately stimulated to study the facts and search for the causes. It soon became evident that the majority of the handicapping conditions discovered originated in early life and were in the main preventable. It had been known for some years that physical defects were very prevalent among school children, but it had not been appreciated that these departures from health were resulting in such serious damage in later life.

The knowledge accruing from these war experiences led to much thinking. It was manifestly impossible to remain idle in the face of such facts. The nation could not be permitted to ignore the situation and become supine. It was somebody's job to keep the menacing conditions fresh in the public mind and to make it realize that unless something radical was done to guard more carefully the health of children, the pitiful situation revealed by the war studies would be perpetuated. To serve such a purpose, Child Health Day was established by the American Child Health Association as an annual celebration in the hope and belief that if the entire nation would set aside one day in each year for serious thought and discussion of child health, its importance would not be lost sight of, and probably out of each year's celebration there would result some constructive effort on behalf of the child.

The first of May was selected as an opportune day for the celebration because for generations it had been the children's festal day. Its vigorous romping and joyous activities were emblematic of health. It would be relatively easy to weave into the program certain health features that would be helpful, that would implant the idea of health in the mind of the child. It was also thought that the parents' interest in May Day might find them more receptive to the health messages that could be given them.

The first "May Day - Child Health Day" found a surprisingly responsive public. Evidently, the average parent needs only to be enlightened as to the vital importance of maintaining his child in health. This was shown by the fact that the American Child Health Association and local organizations were deluged with appeals for health literature and assistance in establishing clinics and centers in which their children might receive intelligent guidance. Each year has found this interest increasing by leaps and bounds, until now activities stimulated on Child Health Day have become a part of the permanent health program in many communities.

Last year every state in the nation participated in the celebration of the day. This widespread interest is doubtless assisted by the fact that it is a basic principle of the American Child Health Association that all of its activities undertaken in the states must be promoted through or with the coöperation of the state department of health. This creates a source of appeal for assistance and guidance which makes for immediate action and permanent results. In the State of Pennsylvania the Secretary of Health is the honorary chairman of the Child Health Day Committee, representatives of his staff serve on the active committee, and his county representatives hold themselves in readiness to aid in the development of programs and the creation of any permanent child-health activities that may be desired. The county committees are instructed to work with, and they have been coöperating with, all of the medical and lay organizations

and institutions in their counties which can aid them or to which they can be helpful. This year they are being especially urged to call to their assistance the county public health associations wherever they have been organized.

The amount of permanent work for the health of children growing out of Child Health Day in Pennsylvania has been most gratifying to the Department of Health and the Child Health Day chairman.

This year the county committees are asked to center attention on the health of the preschool child, and especially to urge parents to have their children physically examined, to see to it that they are vaccinated against smallpox, that they are protected against diphtheria and typhoid fever, and that those who are burdened with physical defects have them corrected before they enter school. It is earnestly hoped that every physician in Pennsylvania will hold himself or herself in readiness to give assistance to the furtherance of this program. It is the function of the county committees to stimulate interest and gain the coöperation of the parents. The basic service must be rendered by the physician. Without his aid the effort must necessarily fail.

The purpose of Child Health Day has been admirably expressed by Mr. Herbert Hoover, Secretary of Commerce, and President of the American Child Health Association, in the Child's Bill of Rights:

"The *Ideal* to which we should strive is that there shall be no child in America that has not been born under proper conditions, that does not live in hygienic surroundings, that ever suffers from undernutrition, that does not have prompt and efficient medical attention and inspection, that does not receive primary instruction in the elements of hygiene and good health; that there shall be no child that has not the complete birthright of a sound mind in a sound body and the encouragement to express in fullest measure the spirit within which is the final endowment of every human being."

NEW POLICY ON BOOK REVIEWS

At a recent meeting of the Board of Trustees of the Medical Society of the State of Pennsylvania a change in policy in regard to book reviews was authorized. Heretofore, an effort has been made to review all volumes submitted, and during the past year the amount of space devoted to this quasi-advertising purpose, if paid for at regular advertising rates, would have netted between $800 and $1,000.

This expensive policy has been reluctantly abandoned because it is not fair, either to our members who are the actual owners of the Journal, or to those firms which lend their financial support in the advertising columns. Reviews of books already accepted will continue to appear in the next few numbers of the Journal, but beginning with April 10th, books will be accepted for review only from firms which patronize the Journal.

CARDIAC DECOMPENSATION

In this number of the Journal a symposium on cardiac decompensation appears. The physician and the surgeon cannot devote too much time to the proper study of the heart in health and disease. The proper interpretation of heart murmurs and heart-muscle action are of intense value, as they are the guide for treatment. The selection of therapy is, of course, most important. It would seem true that more ill-advised therapeusis obtains in the management of the heart than any other organ in the body. And possibly the use and abuse of digitalis is worthy of the greatest consideration.

Rheumatic fever and syphilis call for our urgent attention in the early stages of these diseases, owing to the resulting damaged hearts. The recent discovery by Dr. John C. Small of what appears to be the specific organism of rheumatic fever, and most important of all, the production of a serum to which the disease promptly yields, will rob the cases of carditis due to rheumatic fever of the disastrous end results so common in the past.

We cannot stress too much to the patient of responsible age, or to the parents or guardians of children, the necessity for observation and appropriate treatment when the heart is concerned.

Periodic health examinations will be of inestimable value in prevention of serious consequences, if the practitioner will be keenly alert to detect physical signs, to differentiate between the normal and abnormal findings, and to place the proper interpretation on the results of his examination. He should endeavor, if possible, to appreciate the so-called preclinical findings, or the warning of approaching trouble not yet symptom-producing. By the anticipation of impending changes, functional or organic, much can be accomplished by appropriate advice and treatment to correct matters, or at least to delay the inevitable untoward results.

It would seem that too much stress is being laid upon the need of the electrocardiograph. The art of physical diagnosis should not be sacrificed for machine findings. The electrocardiograph has its distinct field, but is resorted to when not necessary, and its tracings should not be accepted upon their face value in lieu of a careful and thorough physical examination.

RURAL MEDICAL SERVICE

The need of physicians for country districts has been one of the most discussed topics of the recent past, but so far as we have discovered, it has been treated as though the desertion of the country by the physician in favor of the city were an isolated problem, unrelated to the general social trend cityward.

As a matter of fact, the day of the "hayseed" has passed. Country folk have waked up to their right to the same advantages enjoyed by the city dweller. They want their children to be as well educated, they want the same amusements, they want to be as well dressed as their city cousins, they want to be relieved of as much of the drudgery of rural life as is possible with modern machinery, they want better churches, more interesting and vital sermons, better literature, and last but not least, they want better facilities for care of their health. The rural mail delivery, the telephone, the radio, the automobile, better roads, the excellent newspapers and magazines of national distribution—all have played their part in the awakening of the farmer. He has come to feel the need of closer association and coöperation with his fellows in order that he and his family may enjoy the benefits to be derived from joint endeavor.

Farmers' coöperative marketing associations were one of the first concrete results of this awakening. Next were the modern community schools, which replaced "the little red schoolhouse," and to which transportation is provided for the children in a large territory. Once such a school is established, it becomes the center of the community's life, and the people are enthusiastic in its praise.

Rural churches, we are told, are generally in a deplorable condition. The better class of people are conveyed by their automobiles to churches perhaps twenty or thirty miles distant, where more attractive services are held than could possibly be provided by the weaker country church, whose congregation frequently is competing with several other weak churches, each struggling for its life in a territory that might support one live and wide-awake church. The solution of the community church, analogous to the community school, has been suggested. The few country districts that have tried it are enthusiastically urging an extension of the plan.

The question now arises whether some such solution will not be the only method possible to supply the rural territories with the necessary medical attention. The modern scientific practice of medicine is scarcely possible without hospital and laboratory facilities. With the extension of good roads and closer communication, well-equipped community hospitals could readily be established in many counties of the State. It needs only enlightened leadership for the realization of this ideal. Good physicians could undoubtedly be secured to work under the improved conditions that would then obtain, and once the idea was proved workable in a few localities, it would quickly spread to others, for better medical care is a crying need in many places.

The Institute of Social and Religious Research has recently completed a survey of the whole field of public health in village communities, and has found that the feeble efforts of village governments, the attempts of volunteer agencies such as the Red Cross, the Parent-Teachers' Associations, the Anti-Tuberculosis Association, and the school itself sometimes created a number of activities that were, however, unrelated and short-lived. The area covered by the village physician averages from two to four times larger than that covered by any economic, social, or other professional service the village offers. Nevertheless, the village physician is turning his back on this opportunity. In 14 of the 140 representative villages studies, some physician had just left or announced his intention of leaving. In half the villages studied there was neither a health board nor a health officer; and in a majority of cases, where there was a health officer, he was an inexperienced layman who had little spare time to devote to the job. There were few hospitals in the 140 villages, and these were usually small, poorly equipped, and generally losing ventures. There were state clinics of various sorts, but very few of the communities availed themselves of this service. Virtually none of the clinics had any adequate follow-up program. *The outstanding exceptions were in those counties that had a county health unit, where a county health officer with an adequate staff was coördinating the health work of all the communities in the county and giving to all the benefit of a continued scientific program.*

It is evident that intelligent leadership is the most needed factor at the present time. It is doubtful whether community projects could have been carried out prior to the development of present methods of communication; but now that the world is constantly shrinking, we have need of less quantity and better quality in rural service of all kinds—health service included.

The obvious agency to supply this leadership is either the State Medical Society or the State Government, or better yet, the two working in conjunction. The time is ripe for the working out of such a far-sighted and constructive program. Can we supply the leadership?

DISCONTINUANCE OF THE *THERAPEUTIC GAZETTE*

With the March issue, the *Therapeutic Gazette,* founded in 1877, ceased publication. We regret that the publishers deemed it expedient "to ring down the curtain" on this valuable journal.

It is of interest to note that William Brodie was editor from 1880 to 1885, Horatio C. Wood from 1885 to 1890, and Robert Meade Smith from 1890 to 1892. Dr. Hobart Amory Hare became its editor in 1892, and Dr. Edward Martin associate editor.

This journal occupied a peculiar niche in the field of medical journalism. It has faithfully carried its messages of therapeutics to the fireside of the general practitioner, and its discontinuance is to be deplored.

PREVENTIVE TREATMENT AND CONTROL OF THE MENTALLY DEFECTIVE

The publicity given to the problem of the mentally defective in America, as well as in England, is stimulating a very healthful interest in a subject which is vital to the human race and of interest to scientists, psychologists, eugenists, economists, and humanitarians.

An editorial in the *Medical Journal and Record* for January 19, 1927, very aptly reviews this great problem as it now confronts the Board of Control (Lunacy) of Great Britain. The Board recognizes the increase in mental defectives in England, its potential danger to civilization, the specific measures necessary for control (namely, segregation and sterilization), but public opinion regarding personal liberty waxes "hot, then cold" toward instituting sterilization for the purpose of control and correction.

If action rested solely on the outcome of the debate between personal liberty and a degeneration of the human species, and crime, unhappiness—and liberty—should win, we must stand aghast and say "What price liberty?" However, science should be pretty sure of its ground before recommending any surgical procedures if they are contrary to devout theological teaching.

Controversies always accomplish little. The situation is too imperative to countenance longer delays. Apparently with a view of harmonizing controversial groups, many mental-hygiene workers are endorsing a very comprehensive method of procedure which eliminates controversial attitudes. Summed up, the plan is interpreted as follows: A vigorous program is advocated which insures early recognition (diagnosis), institutes procedures looking towards correction of physical defect and faulty environment, and establishes vocational training, all of which should be under the most expert supervision, with segregation as a final resort to control sex offenders and defectives with criminal tendencies. Mating should be controlled at bureaus issuing marriage licenses. The many mental clinics throughout the various states make available practical agencies to this end.

PENSIONS AND HEALTH

Any condition which affects the health of a large body of the population is bound to be of interest to the medical profession, and the pension problem comes under this head.

It is a recognized fact that when a man retires from active service in the work to which most of his life has been devoted, he straightway begins to fail mentally and physically. The majority of pension plans provide for retirement at the age of 70, and in the case of women at 65 or even 60. Yet the fact remains that much of the best creative work in literature, music, and the arts was done in the evening of life. We submit, therefore, that there is something wrong with the system which not only disregards the economic value of the older worker, but which causes his deterioration at a more rapid rate than normal.

Unemployment always brings its own medical problems, for it is invariably accompanied by rising morbidity and mortality rates. It is, therefore, at least in one phase, a medical problem.

The present pension system, while designed to relieve the dependency of old age, has actually increased unemployment in the upper middle years of life. One of our large railroad companies now refuses to take on new employees after age 35. This ruling is a direct outgrowth of the pension system. It deprives the company of many valuable employees, and works a hardship on the middle-aged man who needs a job. Other industrial companies arbitrarily drop employees who have reached a certain age, because they do not want the responsibility of caring for them in their old age.

We have bragged a great deal about this being the "young man's age," but we say little about the meaning of this to the middle-aged man. The difficulty of securing a satisfactory position after middle age has become almost axiomatic. This may be traced largely to the philosophy that holds industry responsible for its workers after they have ceased to be useful to it, although it is partly due to the modern drive for increased production and worship of

efficiency which defeats its own ends in the long run by losing to society the energy and experience of those beyond their early prime.

In spite of these sacrifices to the idea of retirement pensions, investigators tell us that only five to six per cent of industrial workers are cared for by this method, and that it is utterly inadequate to solve the problem of old-age dependency. They tell us that the systems in force at present are unreliable, and do not guarantee payment of the pension promised; that they are not on an actuarial basis, and most of them cannot survive the peak load of beneficiaries which is yet to be reached; and that there is no question that these methods are breaking down, and something else will have to replace them.

Because of the above-recited conditions, we are of the considered opinion that they ought to be replaced, and the sooner the better. Industrial executives have declared that if they could be released from the moral obligation to care for their superannuated workers, they would be glad to give employment to the older men and women as long as they are useful; but since industry is expected to provide for its workers after their usefulness has passed, they cannot afford to take any but young and vigorous applicants.

The situation is growing more and more acute. The present system is regarded by economists as only temporary and palliative, and some substitute must be devised promptly. In the present highly developed industrial stage, the individual worker has not the opportunity to provide for his old age that he had under the former individualistic system. He has been made dependent by conditions beyond his control, and doubtless he will have to be cared for by outside agencies.

The solution most urged at the present time is a State-supervised system of annuities, either contributory or otherwise. This is the most obvious remedy; yet the fact that there is so much opposition to it shows that it is not entirely satisfactory, although a better method has not yet been proposed. The problem is one in which medical advice is needed because of its public-health aspects.

In this connection, also, it is of special interest to the profession that in certain schools of medicine a retirement age has been established for members of the major faculty—medical men at 67 and the surgical group at 65. We do not know of any medical school that retires its teaching personnel with a pension. The full-time professors, who are not permitted to practice, do not have the opportunity to provide for old age, as do those of the clinical group, who are allowed to practice.

We cannot say that we are in entire accord with this arbitrarily established retirement age. Those members of the faculty who are thoroughly up to date in their respective departmental activities, who are efficient in their daily work, who are valuable in the counsel of the medical faculty, and who show by an annual review of their endeavors that a high grade of efficiency is being maintained, should not be automatically retired on account of an inflexible standard. There are instances where the heads of departments should be discontinued long before the retirement age because they are not maintaining up-to-date departments.

Surely some system can be devised by which both young and old can make their own peculiar contribution to the community life, according to their individual capacity.

GENERAL EDUCATION AND MEDICINE

A recent writer, commenting on examinations of candidates for admission to the bar, stated that certain of the applicants did not "take a college course because they did not realize that an education was essential to a professional man."

If one were to judge by much of the manuscript that reaches the editorial office, many of our *physicians* did not recognize that education was essential. It is to be doubted whether any class of professional men write more freely of their experiences, research, and theories than medical men. Scarcely a doctor exists who does not write an occasional paper. Is it not inconsistent, then, to train him to do scientific work, but to fail to teach him how to present this work properly in written form? English spelling, grammar, and construction are an important, but sadly neglected, part of the equipment of the physician.

It is a pity, too, that the physician must live in so constricted a world—a world confined so largely to medicine. His mind would be clearer, and he would do better work if he could find time and taste for other contacts—for music, art, literature, the drama, social activities, and all the multitude of interests open today to the cultivated mind. Some one has said that the rôle of education is not to increase our earning capacity but our capacity for enjoyment. Life is fuller as a result of cultural attainments, and it is unfortunate that the technical knowledge necessary to the practice of medicine must so

completely crowd out a training in other lines as has occurred lately.

The individual who really wants to remedy his educational defects, however, can do a great deal to supplement his professional education by good reading, patronage of the various arts, and an interest in lay activities. He will discover that the time is not wasted, for his broadened outlook on life will be found to yield solid financial returns.

"ACUTE ABDOMEN IN A BABY"

An article bearing the above title which recently appeared in the *Boston Medical and Surgical Journal* is of such importance that it should be called to the attention of every practicing physician and surgeon, especially the general practitioner, to whom such cases are likely to be brought first, and particularly to those physicians who are partly or completely specializing in pediatrics. The many difficulties encountered in such cases are well illustrated, and the means to be employed in differential diagnosis are especially dwelt upon, so that one could not read this article without realizing some of the difficulties to be anticipated and, at the same time, learning something of how to differentiate between them.

Of course, it is the fear that perhaps the abdominal conditions present are only symptoms of an oncoming chest condition that makes one hesitate. Having decided that the trouble is purely abdominal, the next question is, is it medical or surgical, and if surgical, should an immediate or a delayed operation be performed? All of these points are well brought out in the article, and deserve the careful reading and close consideration of all physicians and surgeons doing pediatric work.

MEDICAL EXPERT TESTIMONY

No subject has afforded a discussion so perennial in nature as that of medicolegal testimony. That we are no nearer, in Pennsylvania, to the solution of the question is incontrovertible, despite the fact that efforts on the part of physicians, lawyers, and the laity have been made. Massachusetts and Oklahoma, however, have made advances towards their solution of the problem.

That the prosecution to the end of this matter may be hastened, seems clear, if county and state societies and the American Medical Association were to follow the lead of the Oklahoma State Medical Society and adopt a resolution similar to the one adopted by that State, which in effect is "that it be considered unethical for any of its members within the State of Oklahoma to serve as an expert medical witness, in any court of said State, except he be appointed by the court as an impartial expert."

Oklahoma has solved the problem. The essentials are incorporated in this resolution. Other state medical organizations might do well to follow similar procedures, so that upright, honest, sincere physicians may have a definite guide in determining their relationship to medical legal testimony, regardless of the fact that many individual physicians have long since settled the question by declining this type of work.

HEALTH NEWS

From a published letter in *Time* from R. J. Cromie, Publisher, Vancouver, B. C. (Vol. lx, No. 2, page 2) we deduce that "the old didactic style of writing has gone: people are no longer content to read a full column editorial and then wonder what it is all about. The reading public today want brevity, variety, and versatility, and they want facts." Medical men possibly feel the same toward medical publications. The busy practitioner wants facts in brevity and variety.

Again, the writer appeals for "common-sense understandable health news, which the public today is hungry for. Most of the so-called health services in the newspapers have been run by M.D.'s who are using their space as free advertising for pills, pillets, serums, and surgery. Health is a matter of publication and education, and today I look on it as newspaperdom's best bet."

Although we cannot agree with Publisher Cromie in this latter statement, we are not courting controversy, but are content in saying that, so long as earnest efforts on the part of sincere physicians are, have, and always will be misinterpreted, mental and physical health education should be a fundamental incorporated in the curriculum of primary and secondary schools, colleges, and universities. Health education is too important to be left in the hands of unscrupulous doctors and profit-seeking publishers.

HOSPITALS HAMPERED BY INDUSTRIAL LAWS

In an article written under the caption "Few Hospitals Get 'Even Break' from the Industrial Laws," in the official organ of the New York Postgraduate Hospital, *Hospital News,* will be found some very interesting facts regarding the relationship of the hospitals to service rendered injured workmen under the Workmen's Com-

pensation Laws of the various states. It is estimated that about 2,800,000 days of hospital service are required each year for industrial accidents. It seems to be a universal complaint of hospitals that the Workmen's Compensation Laws are such that the hospital suffers a loss, and in some instances a heavy loss, in caring for these patients. As a result, appeals must be made to the public to contribute to the hospital deficit, because industry does not properly take care of its own.

The article in question truly states: "This question has another serious side for hospitals, because one institution recently learned from an attorney that it would be 'criminally culpable' if it used funds bequeathed to it for charitable purposes to care for industrial patients, because, as the attorney said, these patients' employers were legally responsible for payment for this service, and consequently, the workmen could not be considered as 'charitable patients.'"

JOTS AND TITTLES

Recent Research

"Vitalistic theories," says Dr. Lawrence J. Henderson, professor of physiology at Harvard, "have lost ground until there is very little left of them. The work of chemists who have learned how to synthesize in the laboratory many of the compounds which are formed by living organisms has convinced us that no mysterious vital force is involved in the synthesis of those substances which make up our bodies." So far as we know, he asserts, there is nothing about the phenomena of life inconsistent with physics and chemistry. The analysis of bodily activity at every state below mind involves physics and chemistry, and nothing else.

Dr. George Benjamin Raiziss, professor of chemotherapy in the University of Pennsylvania Graduate School of Medicine, recently told the Philadelphia division of the American Chemical Society about metaphen, a compound of mercury, future development of which may result in a cure for septicemia, tuberculosis, and influenza. It is the strongest antiseptic known to chemists, he said, and is the most powerful organic compound known. Through its ability to kill bacteria, it may result in the prolongation of lives by twenty-five years or more.

An inhalator designed by Howard W. Haggard and Yandell Henderson to resuscitate victims of gas, smoke, and fumes, has been tested as to its effectiveness in removing the effects of alcohol from the system. Dr. Daniel E. Sable, chief physician of the Department of Public Safety, is said to be convinced of its practicability. The device administers a mixture of 95 per cent oxygen and 5 per cent carbon dioxid. It is said to sober the alcoholic in twenty minutes, at a cost of 7 cents a minute.

Experiments to determine the comparative food value of whole-wheat bread and white bread, made respectively with water and with milk, are described by Roscoe H. Shaw, of the Department of Nutrition, American Institute of Baking, in *Baking Technology* for February 15, 1927. It is shown that neither is a satisfactory food alone; that made with water, whole-wheat bread produces better growth than white bread; but that, made with milk, there is very little difference in the food value of the two types of bread. Supplemented with the other foods ordinarily found on American tables, the bread made with "patent flour" may generally be considered as wholesome a food as that made with whole-wheat flour, and one more easily digested.

Dr. P. J. Flagg, of New York City, by studies made to determine the color scheme which would provide the most satisfactory illumination for the operating room, has established the fact that a peculiar bluish-green is the scientifically correct complement to blood when exposed to air. This new color is designated as "eyerest green." Dr. Flagg advocates the use of deep eyerest green on the floor under the operating table, and a shading to a lighter tone as the walls are approached, with the walls fading into a deep cream up to and including the ceiling. It is also his opinion that the table, gowns, toweling, and draperies should be of the deepest tint of eyerest green. Studies of the proper color scheme for the operating room have been made by a number of surgeons, with various recommendations. Dr. Flagg's findings are the latest contribution to the subject.

Volunteers for Blood Transfusions

The blood of all Philadelphia policemen has been typed, and Chief Police Surgeon Hubley D. Owen is keeping records so that when a call is sent for a volunteer to undergo blood transfusion, a policeman whose blood is of the appropriate type is immediately sent for.

Mortality Among Physicians

In the March 5th number of the *Journal of the American Medical Association* is an editorial giving data on the deaths of physicians published in 1926. There were 2,677 deaths, 194 more than in 1925. Deducting the number of deaths from the number of medical graduates in 1926, there was a net increase of 1,285 in the ranks of the profession. The average age of death was 62.8 years. The greatest mortality was between 65 and 69 (389). As to the month, March had the most deaths (325). Ninety-four died from accidents, the automobile being responsible for 36. There were 9 homicides, and 37 suicides. The most common cause of death was heart disease, and cerebral hemorrhage, pneumonia, nephritis, and cancer followed in the order named. There were other causes too. It is of interest to note that 41 died from appendicitis.

Hob O' the Mill

A charming booklet under this title has been brought out by the Quaker Oats Company, 80 East Jackson St., Chicago, Ill., and a limited number of copies are offered free to teachers. The stories are written by Grace T. Hallock and Julia Wade Abbot, and illustrated in color by Emma Clark. They trace the development of the use of grains as human food, delightfully disguised as fairy tales told by Hob himself. Children will love them, and will be encouraged to eat more of the foods that are so good for them.

Don't Do It

"Folks who irritate us" are discussed by *Nation's Business*. "One is the man who has a secretary or a telephone operator call us up, with the result that we interrupt our dictation, turn to the telephone and are met by a voice saying: 'Mr. Whoffles calling; just a

minute, please.' Then we wait four minutes, growing hotter and hotter."

The implication that our time is less valuable than that of our caller is an irritating discourtesy in which the physician ought not to indulge. Yet we are told that not a few specialists are doing it.

Another discourteous custom which seems to be growing on us is described thus in the same article: "In spite of well-organized campaigns, there seems to be a growing tendency to put on letters: 'Dictated but not read'; or 'signed in the absence of Mr. Blank,' and all the other alibis for inaccuracies." Are you one of the offenders? Don't do it!

MEDICOLEGAL AND LEGISLATIVE NEWS

The Pennsylvania Legislature has had a plague of bills this session—more than have ever infested the legislative halls in any previous session. They are like bacteria: there are good ones and bad ones—but the bad ones make the most noise and get the most attention. Of course there have been the ever-present naturopathic and chiropractic bills, and the latter unfortunately managed to slip through the House of Representatives. Perhaps our readers may be interested to know the numbers of some of these bills:

Naturopathic—Senate 423, introduced by Senator Heaton.

Chiropractic—House 933, introduced by Representative Grimes.

One-Board Bill—House 1492, introduced by Representative Haas.

Amending Medical Clauses of Workmen's Compensation Act—House 1498, introduced by Representative Pitts.

Legalizing Spiritualism—Senate 924, introduced by Senator Boyd.

Regulating Pollution of Streams—Senate 926, introduced by Senator Freeman; also House 911, introduced by Representative Bidelspacher.

Authorizing Sterilization of Mental Defectives—House 1386, introduced by Representative Dunn.

Annual Registration of Nurses—House 1480, introduced by Representative Bentley.

Amending Act Establishing State Board of Examiners for Nurses—House 1375, introduced by Representative Bentley.

Regulating State Registration of Nurses—Senate 865, introduced by Senator Freeman.

The United States Congress has recently passed a bill, sponsored by Dr. Chevalier Jackson, of Philadelphia, to compel the proper labeling of all caustic-alkali preparations in interstate commerce. This has been signed by the President, and is now a law.

The Vermont Senate has passed a bill which would provide for eugenic sterilization.

The Child-Labor Amendment to the Federal Constitution was unanimously rejected by the Maryland Senate, although the House of Delegates had previously unanimously approved it.

The New York Supreme Court has issued an order restraining the Association for the Relief of Tubercular Patients from using a cross in any form or design in connection with tuberculosis work, collecting funds by sale of seals, or doing anything that will lead the public to believe they are connected with the National Tuberculosis Association. This organization is said to have collected $3,163 from July 9th to September 22d, 1926, by sale of seals resembling those sold by the National Association, but their actual work up to October 1st consisted "in the care of two patients afflicted with tuberculosis for the support of whom the amount of $152.25 was expended," according to the *Bulletin of the Pennsylvania Tuberculosis Society.*

The Supreme Court of the United States, in the case of Ben E. Hayman v. City of Galveston, Texas, Bayliss E. Harris, J. E. Pearce, et al., has held that "an osteopath has no constitutional right that is infringed by a regulation of a State Board excluding osteopathic physicians from the conduct of a hospital maintained by a State or subdivision thereof, the use of which is reserved for purposes of medical instruction."

Federal Prisons house more violators of the narcotic act than of the prohibition act, according to figures made public by the Department of Justice. There was, however, a sharp decrease in the number of persons serving time last year for narcotic-act violations as compared with the year before. On the other hand, the number of offenders against the National dry law in prison last year was more than double the number of the year before, the total for 1925 being 773, while for 1926 it was 1,837.

To All Holders of Permits Under the National Prohibition Act.—The following open letter has been received from S. O. Wynne, prohibition administrator of the Treasury Department at Philadelphia, Pa.:

"Upon several occasions since assuming charge of this office my attention has been directed to certain practices which are being carried on by outside parties having no connection with the administration of the Federal Prohibition Act either in this office or elsewhere.

"These practices involve false representations of influential relationship upon which are based offers to intercede with this administration in behalf of permittees, or for those applying for permit privileges, the fees for these alleged services in some cases assuming substantial proportions.

"In this connection, all permittees are advised that the policy of this office is that of any well-conducted business organization. When delays occur (and they do occur in the most highly organized enterprises), it is requested that the usual business procedure be followed in seeking relief by notifying this office direct, either by letter or telephone. Permittees are entitled to all office services relating to the lawful exercise of their permit privileges, without involving influence, reward, or obligation.

"In discharging the duties relating to this office, it is my desire that every facility be accorded to the legitimate business and professional interests in my district, and, in return, I bespeak their coöperation in solving the problems incident to effective prohibition administration."

PUBLIC HEALTH

More Cities Require Safe Milk.—Extensive interest of cities in the nation-wide campaign against tuberculosis of live stock is seen in results of a survey recently conducted by the United States Department of Agriculture. A total of 874 cities and towns have ordinances requiring the tuberculin-testing of cattle furnishing milk for consumption. Official reports indicate, with the exception of about one per cent, the ordinances are fairly well enforced. The action of such cities as Chicago, Cleveland, Detroit, and Louisville in promulgating tuberculin-test requirements has stimulated recent interest in this subject. The survey showed, however, that the smaller communities also are fully as active in safeguarding their milk supplies.

Fourteen states have enacted laws or issued regulations authorized by law requiring the tuberculin-testing of cattle. Though varying in details, the laws have the same general purpose—to safeguard the wholesomeness of milk supplies. In all cases, tuberculin tests must be applied by approved graduate veterinarians. A study of reports from the various states explains the rather general adoption of pasteurization as an additional safeguard even when the cattle are tuberculin-tested. Proper pasteurization, as is well known, destroys any infection from other disease-producing organisms that may be present. It also gives double assurance that no living tubercle bacilli are present.

Several states have issued educational literature dealing with bovine tuberculosis, the evidence of transmission to human beings, plans for eradication, and laws and regulations for suppressing the disease. Beside this means of stimulating interest in safe milk supplies, various state officials have drafted sample milk ordinances based on successful ordinances elsewhere. In these are embodied effective and practical provisions for dealing with the tuberculosis problem.

Some cities have taken more definite action than others, but evidence is abundant that city "fathers" are becoming more and more concerned in guarding the milk consumed in their communities.

Is "Slenderizing" Harmful?.—The *Nation's Health* for January contains the following editorial on the fad among young girls for acquiring a sylphlike figure and its probable result:

Tomorrow

Evidence is accumulating to show the dangers to health that may be expected from the present craze for slenderness that is so rampant in the female sex. Observers are reporting increased tuberculosis rates among girls in early adult life due largely to reduced vitality caused in turn by a lack of proper diet.

The body functions must be maintained at all cost, and if insufficient nutriment is provided, the difference must be made up from such reserves as may be available. No one knows as yet how far these reserves can be drawn upon before permanent and disastrous changes take place. These changes may not be in evidence for several years, or until the woman has passed into the family stage with its strains of child-bearing and family care.

It is conceded that each individual enters the world with his metabolic functions fairly well determined and his relation to food intake established within reasonable limits. Attempts at interference always result disastrously to the individual.

There is probably small hope of combating fashion with facts, but in a few years it will be interesting t study the health of a group of the most ardent followers of the styles of 1926—*Health News.*

State Health Department News

The Pennsylvania State Department of Health is now investigating the alleged high infant mortality throughout the State. According to the statistics now on file in the Health Department's office, the infant death rate is unjustifiably high. Authorities at Harrisburg are under the impression that many cases of infant births are not reported, and that this fact, rather than the number of deaths, has had much to do with the apparently high infant mortality in this Commonwealth. The Secretary of Health draws attention to the fact that the law expressly requires all physicians to report the birth of a child within ten days. The coöperation of all physicians in the State is earnestly requested in this very vital phase of the bookkeeping of human life.

According to a report submitted to the Secretary of Health, there are now 176 child-health centers under the direct supervision of the State Health Department. In addition, 246 local centers are coöperating with it. The prenatal clinics under State control number 10, the coöperating clinics reaching the number of 73.

During the month of January the State Department of Health distributed free toxin-antitoxin in sufficient quantities to immunize 17,809 children. Tetanus antitoxin was furnished by the Department sufficient to treat 351 people. Silver-nitrate capsules for the protection of the eyes of the newborn were distributed to the amount of 1,111, this latter material being forwarded to physicians pursuant to the regulations of the State Advisory Board requiring preventive treatment in the eyes of infants.

The Mont Alto State Sanatorium cared for 775 patients during February. Plans are now under way at that institution as well as at Cresson for the children's spring and summer classes. Over 600 undernourished and predisposed-to-tuberculosis children, for the most part from the larger cities, will be supervised at these sanatoria during the coming season. As in the past, the sun treatment, which has proved so successful in cases of this character, will again be applied.

Secretary of Health Appel recently issued a warning directed especially to the mining districts of Pennsylvania relative to the comparatively large number of accidents to children growing out of the careless handling of blasting caps. At the same time he advised those who are wounded by black powder to call immediately for the attention of a doctor in order to avoid a possible complication of tetanus.

Through the efforts of the Beaver County Public Health Association during a period of two weeks, 17,000 out of a total of 31,000 school children have already been immunized with toxin-antitoxin. This campaign was carried on in conjunction with the State Department of Health. It is understood that the anti-diphtheria campaign will be continued vigorously.

The average number of patients at Cresson Sanatorium for February was slightly over 700. Since the sanatorium was opened, thirteen years ago, 15,420 patients have received treatment there.

A recent report received from the School Division of the State Bureau of Child Health shows that 7,517 fourth-class schools were inspected during 1926. There were 157,473 pupils notified of physical defects. A large percentage of these handicaps have already been remedied. The saving in suffering, disease, and even in death itself, is thus shown in the State's medical school-inspection work. The percentages of defects were: decayed teeth 52, enlarged tonsils 31.6, defective nasal breathing 6.4, defective vision 19.9, malnutrition 20.0.

Radio reception has been installed in all wards at the Hamburg Sanatorium. Care was given to 450 patients during the month of February, and to date 12,600 patients have been admitted.

An outbreak of trichiniasis recently occurred among students at the Seminary of the Reformed Church, Lancaster, Pa. Investigations by the State Health Department's epidemiologist confirmed the local diagnosis. Laboratory tests also were confirmatory. These cases developed from the eating of raw sausage forwarded from Butler County. One of the students succumbed.

Dr. Mary Riggs Noble, in charge of the State Health Department's plans for Child Health Week, has announced that 36 counties have been organized to date. Emphasis this year will be placed upon preschool children. Heretofore most of the activities have been directed toward the school child.

The Pennsylvania Pulp and Paper Company is coöperating with the Pennsylvania State Health Department by devising ways and means to eliminate or render safe the waste and waste products of this industry now being discharged into some of the Pennsylvania streams.

The recently appointed Milk Committee, representing the industry in the State of Pennsylvania, which is working in connection with the State Department of Health to improve the conditions under which this product is made available to the consuming public, has proposed legislation which will increase the powers of the Pennsylvania State Advisory Board with reference to this matter.

HOSPITAL ACTIVITIES

National Hospital Day.—According to *Hospital Management,* the object of National Hospital Day is vital, important, and essential to the welfare of the hospitals of America. It is for the promotion of such ethical and educational publicity as will familiarize the citizens of every community with their hospital—its functions, organization, administration, procedures, and service, in order: (1) to arouse deeper interest in the hospital from every standpoint, scientific, educational, financial, and other; (2) to establish and maintain community and individual confidence in hospitals, particularly for those who may need to use such institutions, all of which tends to produce better results so far as treatment is concerned; (3) to promote better coöperation of municipal and governmental bodies, allied organizations, community service clubs, and other organized groups with the hospital.

There are numerous by-products of National Hospital Day which are the outcome of the fulfillment of the above object: (1) From the standpoint of the patient, the proper knowledge of the hospital acquired through National Hospital Day observance brings the patient to the hospital earlier and in a better mental attitude through the confidence developed. (2) From the standpoint of the hospital superintendent and personnel, a better understanding and appreciation by the public of the onerous and responsible duties of the hospital superintendent and the personnel results. (3) From the standpoint of the medical staff, the public secures a more intelligent grasp of what real scientific medicine means, which is today very necessary. (4) From the standpoint of the hospital trustee, National Hospital Day observance, without doubt, has brought out a much better understanding as to what an important public utility the hospital is and why it costs money for new buildings, extensions or alterations, and maintenance. The magnificent gifts made to hospitals by individuals and the numerous successful financial campaigns which have been put over have been, to some extent at least, inspired by National Hospital Day activities. (5) From the standpoint of the school for nurses, through the enlightenment of parents and young women, information is disseminated as to the opportunity for community and national service. (6) From the standpoint of better hospital legislation there is no doubt that the educational publicity which reaches the lawmakers through this source should surely result in more intelligent and sympathetic legislation on the part of the various governments.

The committee had very definite conclusions and recommendations regarding National Hospital Day. The more important of these are: (1) That the National Hospital Day program, as carried on through the international and regional committees coöperating with the general offices of the Association, is a most effective method of promoting the observance of the day. (2) That all hospitals should focus on the most effective method of celebrating National Hospital Day, which, the committee believes, is the well-organized and carefully guided tour of observation through the hospital at work, thus providing a better personal touch and acquaintance of the visitor with the personnel and activities of each department. (3) That all means of ethical and educational publicity should be utilized to accomplish the fullest effect of the day. (4) That National Hospital Day has yet many latent possibilities which can and should be developed to the benefit of the hospitals of the United States and Canada, and to this end the National Committee recommends that each regional committee carry on a continual campaign to induce one hundred per cent of the hospitals in their respective areas to celebrate National Hospital Day. (5) The Committee recommends that each regional committee file with the Association, according to prescribed form, a complete description of the method of observance of National Hospital Day by each hospital in each particular region or area and such exhibits as are available, all of which to be a basis for appraisal by the National Committee, or a subcommittee thereof, to ascertain how near such observance attains the real object as stated in this report; and further, that an annual competitive trophy be given to the winning regional committee and an attractive award to the hospital of the United States or Canada worthy of highest individual appraisal in this respect.

How Long Before the Hour Set for an Operation Should the Patient be Taken to the Operating Suite?—The construction of the hospital must be considered before any definite answer can be made to this question. The farther the operative suite is removed from the surgical wards the more time, of course, will be required for the transportation of the patient to the operating clinic. Some surgeons, when they are facing a busy morning's work, prefer to have their patients all brought to the clinic at the same time; or else to have always at hand at least one patient in addition to the one who is undergoing operation. It appears to be a distinctly bad practice to move a patient from his ward or room to the operating suite any considerable period of time before the operation actually begins. Previous reference has been made in the *Modern Hospital* to the inadvisability of augmenting the fear and mental unrest that always exist in the patient's preoperative mind by unnecessarily subjecting him to the sights, sounds, and odors of a busy operating suite.

Various hospitals have written into their rules a definite period of time before operation at which the patient must be in the clinic. This is usually placed at fifteen minutes, although where organizations have been greatly perfected a shorter period may serve the purpose of not causing delay to the surgeon by requiring him to wait for his next patient. Usually the assistant at the operation (particularly in surgical teams that have gained much coöperative skill) at the proper time notifies the nurse of the operating room

to send for the next patient. This can be done quietly without disturbing the surgeon's work. In abdominal operations, when the surgeon is ready to insert his skin sutures, the assistant usually sends word to the anesthetist to start the ether on the next case. So accurately can the time required for the placing of dressings on the patient being operated on, the removal of gowns, the scrubbing of hands, and the donning of new sterile gowns be gauged that the waste of the surgeon's time is negligible. Particularly is this true, if the operative suite is equipped with several operating rooms, and the surgeon and his assistant need but walk to another room which has been prepared for the next operation.

It appears to be an eminently fair practice, in so far as the welfare of the patient is concerned, for the hospital superintendent to insist that rules be both made and enforced that will prevent patients being brought to the clinic long before their operation is actually to begin, rather than remaining in their rooms or wards until the time when the surgeon can immediately undertake the treatment of the case.—*Modern Hospital.*

The Ambulance and Errands.—Is it unwise to use the institutional ambulance in the performance of errands, such as making trips to the bank or the transporting of small packages from the express office? The answer to this question will depend upon the size of the hospital, and the motor equipment which it possesses. Most hospitals own utility conveyances for the performance of such work. The construction and equipment of the hospital ambulance is such that it does not easily lend itself to the transportation of express and freight packages of size, or of those materials and supplies that will mar and soil the interior of the ambulance. The appearance of the ambulance on the street should signify that it is on an errand which has as its object the transportation of patients. It seems much better for the hospital to possess a small passenger car or truck for the carrying out of these errands, than to utilize its ambulance for this purpose. It may be added that the appearance of the ambulance and the dignity of the driver and the physician who accompany it have much to do with the public's opinion.—*Modern Hospital.*

Where the Care of a Patient and the Education of Nurse Meet.—An important matter is the establishment of definite regulations and routines for ward administration. The writer suggests that a "Book of Knowledge," call it what you will, should be in every ward and easily accessible to every nurse. Its basic contents should provide general information pertaining to ward administration from its different angles. It should be uniform on all wards, differing only in special routines, orders, or regulations as required for special departments and not applicable to all wards. A copy of this book should be kept in the classroom, and the student from the earliest period in her training should be taught to familiarize herself with the contents to realize their value as a double check when in doubt. This book should be of a strong nature, loose leaf, so that as routines change they may be removed, or as new routines develop or new regulations are enforced they may be properly indexed and added. Special nurses should be referred to this book for guidance while on duty in the hospital.—*Hospital Management.*

"The Book of Knowledge."—"The Book of Knowledge" referred to in our foregoing paper is designed to standardize procedures and methods and to improve efficiency through reduction of loss of time and elimination of methods that have been found faulty. As an indication of the scope of the book, the following table of contents is given: Admission of patient, routine for, including listing of clothes. Aspiration. Bed and cot making. Baths—temperature of bath water, bed bath, temperature sponge, foot bath. Basket—toilet basket, mortuary basket. Care of bath room, linen rooms, pantry, refrigerators, rubber goods. Charting. Catheterization, bladder irrigation. Care of the dead. Discharging of patients. Dressings. Douches, vaginal, nasal, aural. Enemata—simple, soapsuds; (a) high, (b) low; medicated, carminative, nutritive, sedative, astringent. Feedings, nasal. Fire regulations. Gavage. Glassware. Hypodermoclysis or interstitial. Hot-water bottles. Hypodermic tray. Irrigations—ear, nose, and throat; eye, colon, or enteroclysis. Intravenous transfusion. Ice caps. Stomach lavage. Medicines. Operations—routines for preparation, anteoperative care, postoperative care. Packs—hot packs, cold packs. Proctoclysis—Murphy drip. Puncture—exploratory, lumbar. Phlebotomy or venesection. Pneumonia. Rules, ward regulations. Requisitions. Solutions. Stupes—plain, medicated. Specimens. Smears. Thermometers. Transfusion. Morning and evening toilet. Vaginal examination. Treatment for venereal patients. Washing patients' hair.—*Hospital Management.*

Nurses' Uniforms and Laundry Cost.—While the design of the uniform of the school of nursing in many instances has attached to it appeals from the standpoint of tradition and sentiment that make changes difficult to effect, some superintendents of nurses and others directly interested are making changes toward simpler styles from time to time. In this connection, a manufacturer of laundry equipment recently told of a considerable reduction in the cost of laundering uniforms that was effected by reason of the redesigning of the uniform of a hospital in the East. This change made it possible to iron uniforms on a flat-work ironer, thus eliminating to a great extent the more expensive hand ironing. This man, who in his work constantly visits hospital laundries, also said that there is a trend toward simpler types of uniforms, and that those requiring hand ironing are considerably fewer than before. This is a question that could be taken up in any school of nursing which contemplates a change in uniform or in any hospital which plans to establish or reorganize its school of nursing.—*Hospital Management.*

Sues for Pledges.—Occasionally after a campaign for a building fund has been completed by a hospital, failure of donors to pay their pledges promptly has given rise to serious consideration of legal means of enforcing payment. This matter always has been looked on in a more or less unfavorable light by hospital administrators, and there have been occasional instances where the filing of suits has been announced and no further action taken. It is interesting, therefore, to learn that the Newark Beth Israel Hospital, Newark, N. J., recently decided to start suit against a few of the subscribers who did not meet payments on their pledges. They gave the matter considerable publicity. The results were surprisingly good. Many people who had made small pledges and did not make any payment have started to make payments or have come in and made arrangements for future payments. Four suits were started against delinquent donors to the building fund. These four had signed pledges but had not lived up to their agreements. One was for $1,000. He immediately tendered a check, which was not accepted until the court costs were paid by him. The other three have made offers of settlement, but they are amply responsible and suits are being instituted. The announcement was given

considerable publicity in the newspapers, and has resulted in almost 200 delinquent subscribers communicating with the treasurer with offers of settlement and promises to pay in the near future. There has been little, if any, criticism, but many in the community who were delinquent are making an effort now to pay up. The collections have increased very materially since the publication of the article.—*Hospital Management.*

INDUSTRIAL MEDICINE

"The Lead Hazard and Compensation."—The Department of Labor of New York State has recently issued a helpful and practical bulletin under this title. It is divided into two parts, the first giving the elementary principles concerning the fate of lead in the body and reviewing the symptomatology and diagnosis; and the second containing instructions to physicians as to the preparation of lead cases which are to appear for compensation, and a classification of cases under a suggested new terminology. Under blood examination is stressed the importance of looking for other changes in addition to stippling. Under examinations of excreta, feces examinations for lead are declared to be worthless, as it is impossible to distinguish between merely swallowed and circulating lead. The following classification of cases is suggested: (1) Lead poisoning —applied only to the toxic episodes of the disease, as lead colic, lead palsy, and lead encephalopathy. (2) Lead absorption: (a) with clinical manifestations; (b) without clinical manifestations. ((a) is further subdivided into (1) with disability; (2) without disability.) The absolute need of laboratory examinations of the blood for abnormalities and of the urine for lead is insisted upon.

Court Decisions.—A case of musculospiral paralysis from exposure to cold was presented to the Kansas courts. The complainant, employed in a packing company, carried casings stuffed with frozen meats from one part of the plant to another. She claimed that her arm became so cold that it was numb, and that buckets of warm water were provided into which she would put it after removing the sausage. After 30 days' work she had pains in her arm. Her physician first noticed "wrist drop" (pp. 152-153).

An award for tuberculosis of the lungs consequent upon breathing granite dust in the person of a tool sharpener was granted by the Wisconsin Industrial Commission and assessed against 3 employers. The circuit court and the supreme court held that the accident was within the constitutional province of the legislature and the delegated powers of the commission, and affirmed the judgment (pp. 162-163).

An employee of a sparkler and specialty company at Elkton, Md., contracted phosphorus poisoning, resulting in various surgical operations and serious disfigurement. She brought an action, by her father as next friend, for the amount of $22,500, under the state compensation act, but demurrer was overruled. The defendant then appealed. The lower court affirmed that the employer was liable at common law if the injury was not compensable under the terms of the compensation act, and that the disease of phosphorus poisoning was an injury outside of the purview of the act. The court of appeals, finding the question a new one, considered the subject at length. "The phosphorus poisoning of the employee as described in the declaration was therefore not a disease incident to the industry, but was an injury in causal connection with her employment, within the meaning of the act defining injury to 'mean only accidental injuries arising out of and in the course of employment and such disease or infection as may naturally result therefrom.'" The judgment for damages was reversed, but on a motion for a modification of this judgment, in view of the newly alleged fact that the employee was under 18 years, the court remanded the case with leave for a new trial, but the case was afterwards compromised (pp. 213-216).—*U. S. Bureau of Labor Statistics,* Bull. No. 417 (pp. as above cited), Labor Decisions, 1925.

Summary of Recent Decisions of Workmen's Compensation Board

The claimant's work consisted of pressing a print upon pottery ware with her thumb. It became necessary to amputate the first phalanx of the thumb because of the decay of the bone. The claimant could not definitely determine the exact occasion of an injury, but her physician testified that the trouble started from a bruise to the finger due to her work. The defense of occupational disease was overruled and an award was affirmed.

Where it is established that an accident occurred, it is unnecessary to show the precise manner in which that accident happened. The decedent reported to work apparently well. During the day he began to limp, and a fellow employee saw him holding his foot. On his return home, his wife found the foot was bruised. The physician attributed the condition of his foot to an injury. Death was due to septic poisoning of the foot. It was held sufficient to prove an accident within the course of employment.

Claimant alleged that he suffered a strain to his back while moving heavy objects at work. The work he was doing was "the same as usual." An impartial physician to whom the Board referred the record testified that the claimant had a spinal condition due to infection, and that anything would be sufficient to precipitate pain. It was held that the alleged accident was so indefinite in character, and its results, if established, so slight in effect upon the ultimate development of disability, that it should not be considered an accident. Compensation was disallowed.

The referee found that the excessive heat and character of work which the claimant did on a certain day precipitated a rupture of the blood vessels producing death due to a hemorrhage of the cerebellum, and made an award. The decedent was employed as a stationary engineer. He had been suffering from arteriosclerosis for some time, and on the day of his collapse had worked in the boiler room where the temperature was about 120 degrees. His physician was of the opinion that a heat stroke suffered by the decedent at work induced the hemorrhage. The award was affirmed. The Board distinguished the case from the case of Gausman v. Pearson, 284 Pa. 348, and remarked that the conclusion would not be affected by the fact that the work which the decedent was doing was not different from that which he ordinarily did.

The decedent was found in the gangway of the mine where he was employed. He was in distress and could not talk. He pointed to a ladder which it had been necessary for him to descend, and said the word "slipped." He died of cerebral hemorrhage four days later. It was held that a fair inference from the surrounding circumstances is that the decedent slipped while descending the ladder, causing violence to the physical structure of the body which precipitated the fatal attack of cerebral hemorrhage, and an award was affirmed.

THE MEDICAL SOCIETY

OF THE STATE OF PENNSYLVANIA

OFFICERS' DEPARTMENT

WALTER F. DONALDSON, M.D.
Secretary
8062 Jenkins Arcade Building
Pittsburgh, Pa.

GOOD RECEPTION

Contributions to the Medical Benevolence Fund of the Medical Society of the State of Pennsylvania received since February 1, 1927, but not previously acknowledged in the columns of the JOURNAL are as follows:

Lancaster County Medical Society ..	$135 00
Edward B. Heckel, Pittsburgh	100 00
Thomas McCrae, Philadelphia	100 00
William T. Sharpless, West Chester.	100 00
Orlando H. Petty, Philadelphia	50 00
George F. de Schweinitz, Philadelphia	50 00
Huntingdon County Medical Society.	50 00
W. Wayne Babcock, Philadelphia ..	25 00
James A. C. Clarkson, Lewistown ..	25 00
Walter F. Donaldson, Pittsburgh ...	25 00
Robert B. Greer, Butler	25 00
Daniel J. McCarthy, Philadelphia ..	25 00
Hugh E. McGuire, Pittsburgh	25 00
Arthur Miltenberger, Johnstown ...	25 00
Robert K. Rewalt, Williamsport	25 00
Harvey F. Smith, Harrisburg	25 00
Samuel J. Waterworth, Clearfield ...	25 00
Edward A. Weisser, Pittsburgh	25 00
Hobart H. Hare, Philadelphia	15 00
Michael V. Ball, Warren	10 00
Moses Behrend, Philadelphia	10 00
Augustus S. Kech, Altoona	10 00
Curtis C. Mechling, Pittsburgh	10 00
Herbert S. Van Kirk, McKeesport ..	10 00
Walter E. Egbert, Chester	5 00
Samuel C. Wilson, Oxford	5 00
	$935 00

Pledges have been received as follows:

Harry W. Albertson, Scranton	$100 00
Donald Guthrie, Sayre	100 00
Harry W. Mitchell, Warren	100 00
Lever F. Stewart, Clearfield	100 00
	$400 00
	$1,335 00

This notable response to the appeal by the Committee on Medical Benevolence of the Medical Society of the State of Pennsylvania is most encouraging, and will, it is hoped, inspire many other members to contribute to this worthy Fund. Contributions or pledges may be mailed to Walter F. Donaldson, Secretary, Jenkins Arcade Bldg., Pittsburgh, Pa.

IN THE DAY'S WORK

A special meeting of the Board of Trustees was held at the Society's headquarters, Harrisburg, Tuesday morning, March 28th, for the consideration of pending legislation. The members of the Board, in conference with members of the Public Health Legislation Committee, the Commission on Compensation Laws, and the Commission on Conservation of Vision, as well as members of the House and Senate who are also members of our Society, gave careful consideration to various House and Senate Bills whose enactment might or might not favor the health interests of the people of the State.

As a result of the morning's conference, members present appeared in the afternoon before various committees of the Legislature, protesting against or favoring the enactment of the bills above referred to.

It is not known that the Society's efforts to foster the best health interests, individually and collectively, of our fellow citizens are completely understood or properly appreciated. Nevertheless, the active and continuous functioning of such standing committees as those above mentioned, as well as the Committee on Public Relations and the Committee on Defense of Medical Research, is invaluable. The activities of standing committees in our Society, however, do not relieve our individual members of their responsibility, if we do not protest against the activities of those who, having entered the practice of medicine by the "back door," biennially seek legalization of their unlicensed practice.

The system adopted in Pennsylvania of creating special licensing boards is based on the false premise that the use of various specific therapeutic agents, such as massage or manipulation, constitutes a "system" or "school" of treatment of human ailments.

A candidate for license to practice the healing art who states that he restricts himself to one of the innumerable methods of curing disease should, instead of receiving special privileges by law for being a specialist in a "new school" or a "new system" of healing, be denied the right to practice healing at all, because of his confessed ignorance of most of mankind's known curative agents.

By what other standards of preparation can our people be assured of the benefits of the more modern methods of treatment, such as the proper use of insulin, antitoxins, serums, blood transfusion, x-ray, radium, and the miracles of modern surgery?

CANDIDATES FOR THE 1927 HONOR ROLL

On March 20, 1927, this office had received the annual assessment of 5,732 members; on the same day, 1926, 5,468; on the same day, 1925, 5,582.

The percentage of 1927 dues received at this office March 20th is herewith indicated:

Center—100%; Clarion—100%; Greene—100%; Juniata—100%; McKean—100%; Monroe—100%; Montgomery—100%; Montour—100%; Sullivan—100%; Union—100%; Wyoming—100%; Chester—99%; Berks—96%; Elk—96%; Franklin—96%; Adams—93%; Lawrence—93%; Mercer—93%; Warren—93%; Lancaster—91%; Somerset—91%; York—91%; Bucks—90%; Delaware—90%; Lycoming—90%; Allegheny—89%; Cumberland—89%; Huntingdon—89%; Schuylkill—89%; Cambria—87%; Carbon—86%; Potter—86%; Fayette—85%; Mifflin—84%; Lackawanna—84%; Crawford—83%; Bedford—82%; Northumberland—82%; Perry—82%; Lebanon—80%; Bradford—79%; Columbia—79%; Butler—78%; Lehigh—76%; Northampton—76%; Clearfield—75%; Susquehanna—74%; Tioga—73%; Washington—72%; Erie—70%; Clinton—68%; Jefferson—68%; Philadelphia—68%; Blair—66%; Wayne—64%; Westmoreland—63%; Armstrong—58%; Indiana—55%; Beaver—52%.

CHANGES IN MEMBERSHIP OF COUNTY SOCIETIES

The following changes have been reported to March 17:

Allegheny: *New Members*—Albert Berkowitz, 10 E. North Ave., Pittsburgh; Howard R. Waddell, 309 Olive St., McKeesport. *Transfer*—Howard E. Emerson, Highland Bldg., Pittsburgh, from Westmoreland County Society. *Deaths*—Albert Pettit, Pittsburgh (Jeff. Med. Coll. '84), January 20, aged 69; Samuel D. Jennings, Sewickley (Jeff. Med. Coll. '68), March 8, aged 83.

Armstrong: *New Member*—Adam Gunzalez, Templeton.

Beaver: *New Member*—George R. Boyd, Beaver Falls.

Blair: *New Members*—Harry B. Corl, 1104 13th Ave., H. H. Dight, Central Trust Bldg., Altoona. *Reinstated Members*—William P. Harlos, 1428 12th Ave., Henry B. Replogle, 616 Fourth St., Altoona.

Bradford: *Death*—John E. Daly, Ulster (Med. Chir. Coll., Phila., '05), February 10, aged 50.

Cambria: *New Members*—Clyde J. Bibb, 904 Main St., James F. Schofield, 809 R. R. St., Portage; M. Dwight Rhoads, 445 First St., Conemaugh; Charles B. Jones, Summerhill; Vincent J. Mulvehill, Carrolltown; William W. Livingston, Dunlo; F. Orville George, 422 Main St., David W. Truscott, Main St., South Fork.

Center: *Death*—Robert J. Young, Snow Shoe (Coll. Phys. & Surg., Balt., '89), aged 65.

Chester: *New Members*—J. Huston Johnson, Glen Moore; John G. Baxter, 224 Bridge St., Phoenixville; Dominic J. Rosato, Box 134, Berwyn; Bradford C. Scudder, West Chester; Philip Fiscella, Chester County Hospital, West Chester.

Columbia: *Reinstated Member*—Jacob H. Vastine, 142 Montgomery Ave., Cynwyd.

Cumberland: *Removal*—Donald B. Coover from New Cumberland to Littlestown (Adams Co.).

Crawford: *New Members*—George Faries, Meadville, Joseph Connor, Meadville.

Dauphin: *Resignation*—Frank Smith, Harrisburg. *Removal*—L. W. Frasier from Camden, N. J., to 2834 Frankford Ave., Philadelphia.

Erie: *New Members*—H. E. Spaulding, 716 Sassafrass St., James H. Delaney, 2024 Sassafrass St., Erie; Charles B. Kibler, Corry.

Fayette: *New Member*—Cataldo Corrado, Connellsville.

Franklin: *Death*—Rebecca P. Laughlin, Philadelphia (Woman's Med. Coll. '97), aged 70.

Greene: *New Member*—Penrose H. Marquette, Nemacolin.

Lackawanna: *New Member*—Francis T. Cavill, Jessup. *Reinstated Members*—Harry M. Mittleman, 504 Main St., Duryea; Irwin W. Severson, 641 No. Main Ave., Elmer B. Shaul, 345 Wyoming Ave., Scranton; Welles J. Lowry, Liberty Bank Bldg., Carbondale.

Lancaster: *New Member*—Wayne Regar, Ephrata.

Lawrence: *Transfer*—Hugh M. Hart, New Wilmington, from Fayette County Society.

Lebanon: *New Members*—Monroe D. Reese, 123 N. 8th St., Lebanon; Warren I. Brubaker, 43 W. Main St., Annville.

Lehigh: *New Members*—William F. Matthews, 936 Hamilton St., A. M. Peters, 45 N. 11th St., Allentown.

Luzerne: *New Members*—L. G. Wetteran, McAdoo; C. J. Kistler, 304 Wyoming Ave., Kingston; B. J. McGuire, 17 So. Main St., Pittston; Marvin C. Johnson, 567 Wyoming Ave., Kingston. *Death*—Erick A. Adams, Wilkes-Barre (Univ. of Penna. '13), recently, aged 37.

Montgomery: *New Member*—John C. Burris, Wyncote.

Perry: *New Members*—George S. Kinzer, Ickesburg; A. D. Van Dyke, 1527 Clay Ave., Scranton (Lackawanna Co.).

Philadelphia: *New Members*—Delazon S. Bostwick, 4111 Walnut St., Alfred H. Diebel, 3025 Frankford Ave., Joseph Edeiken, Mt. Sinai Hospital, Hortense Ermann, 1802 W. Erie Ave., Jacques P.

Guequierre, 1818 Lombard St., William E. Masters, 1803 Pine St., Samuel B. Hadden, 6339 Chester Ave., Max Cohen, 2606 N. 31st St., Jean Crump, 250 S. 21st St., Benjamin P. Seltzer, 634 Ritner St., Joseph H. Clyman, 1324 Germantown Ave., Robert C. Colgan, 5722 N. 5th St., Joseph Bank, 2045 Spruce St., Franklin S. Gillespie, 1824 Pine St., Philadelphia. *Reinstated Member*—Morris S. Shapiro, 914 Pine St., Philadelphia.

Schuylkill: *New Members*—Leroy R. Purcell, Heckscherville; Henry D. Rentschler, Ringtown; Clemens S. Burke, Pottsville.

Tioga: *Death*—Nathan W. Mastin, Wellsboro (N. Y. Univ. Med Coll. '79), February 4, aged 80.

Union: *Death*—Charles A. Gundy, Lewisburg (Univ. of Penna. '96), February 21, aged 55.

Wayne: *New Member*—H. L. Masters, White Mills.

Westmoreland: *New Member*—James A. Cowan, Jr., 629 Main St., Mt. Pleasant. *Death*—Daniel E. Beltz, Ligonier (Phila. Univ. of Med. & Surg. '65), March 6, aged 89.

York: *New Members*—Elwood P. Flanders, 150 S. Duke St., Fred F. Bergdoll, 1034 N. George St, York; Frederick W. Wright, 14 Stock St., Hanover. *Death*—John K. Blanck, Wrightsville (Jeff. Med. Coll. '82), February 16, aged 82.

PAYMENT OF PER-CAPITA ASSESSMENT

The following payment of per-capita assessment has been received since February 15th. Figures in first column indicate county society numbers; second column, State Society numbers.

Feb. 16	Blair	1-60	3287-3346	$300.00
	Armstrong	1-27	3347-3373	135.00
	Schuylkill	101-120	3374-3393	100.00
	Mifflin	20	3394	5.00
	Huntingdon	24-25	3395-3396	10.00
	Cumberland	23-25	3397-3399	15.00
17	Chester	1-59	3400-3458	295.00
	Mercer	57	3459	5.00
	Delaware	80-81	3460-3461	10.00
	Fayette	17-62	3462-3507	230.00
	Montgomery	107-127	3508-3528	105.00
	Erie	51-67	3529-3545	85.00
	Franklin	41-46	3546-3551	30.00
18	Lehigh	17-45	3552-3580	145.00
	Luzerne	101-116	3581-3596	80.00
	Delaware	82-85	3597-3600	20.00
	Northumberland	36-41	3601-3606	30.00
	Bradford	13-19	3607-3613	35.00
	Dauphin	115-116	3614-3615	10.00
	Columbia (1926)	38	7587	5.00
22	Northampton	30-77	3616-3663	240.00
	Lackawanna	20-86	3664-3730	335.00
	Delaware	86	3731	5.00
	Potter	10-11	3732-3733	10.00
	Butler	2-31	3734-3763	150.00
23	Bedford	9-10	3764-3765	10.00
	Somerset	30-36	3766-3772	35.00
	Lebanon	18	3773	5.00
	York	97-99	3774-3776	15.00
	Cumberland	26-28	3777-3779	15.00
	Lycoming	84-92	3780-3788	45.00
24	Cambria	102-114	3789-3801	65.00
	Mifflin	21	3802	5.00
	Columbia	23-27	3803-3807	25.00
	Mercer	58	3808	5.00
25	Columbia	28	3809	5.00
	Delaware	87-90	3810-3813	20.00
	Wayne	16-18	3814-3816	15.00
28	Lackawanna	87-115	3817-3845	145.00
	Delaware	91	3846	5.00
	Somerset	37	3847	5.00
	Schuylkill	121-130	3848-3857	50.00
	Mifflin	22	3858	5.00
Feb. 28	Center	23	3859	$5.00
Mar. 4	Elk	22	3860	5.00
	Clinton	13-14	3861-3862	10.00
	Franklin	47-48	3863-3864	10.00
	Montgomery	128-141	3865-3878	70.00
	Lancaster	53-71	3879-3897	95.00
	Luzerne	117-136	3898-3917	100.00
	Somerset	38-39	3918-3919	10.00
	Mercer	59-61	3920-3922	15.00
	Dauphin	117-131	3923-3937	75.00
	Northumberland	42-46	3938-3942	25.00
	Cumberland	29	3943	5.00
	Lebanon	21	3944	5.00
	Greene	27	3945	5.00
7	Lackawanna	116-142	3946-3972	135.00
	Mercer	62	3973	5.00
	Delaware	92-93	3974-3975	10.00
	Franklin	49-50	3976-3977	10.00
	Mifflin	23	3978	5.00
	Cumberland	30-31	3979-3980	10.00
	Cambria	115-126	3981-3992	60.00
	Huntingdon	26-28	3993-3995	15.00
	Bedford	11-13	3996-3998	15.00
	Columbia	29	3999	5.00
	Westmoreland	52-85	4000-4033	170.00
	Butler	32-38	4034-4040	35.00
	Mifflin	24	4041	5.00
	Crawford	1-33	4042-4074	165.00
9	Allegheny	351-791	4075-4515	2,205.00
	York	100-109	4516-4525	50.00
	Northampton	78-88	4526-4536	55.00
	Clinton	18	4537	5.00
	Bradford	20-25	4538-4543	30.00
	Lancaster	72-116	4544-4588	225.00
	Erie	68-79	4589-4600	60.00
	York	110-113	4601-4604	20.00
	Chester	60-69	4605-4614	50.00
	Delaware	94-95	4615-4616	10.00
	Huntingdon	29-30	4617-4618	10.00
10	Philadelphia	1051-1342	4619-4910	1,460.00
	Potter	12	4911	5.00
	Mercer	63	4912	5.00
	Dauphin	132-138	4913-4919	35.00
	Perry	7-12	4920-4925	30.00
11	Lawrence	34-50, 52-58	4926-4949	120.00
15	Indiana	1-20	4950-4969	100.00
	Butler	43-44	4970-4971	10.00
	Bedford	14	4972	5.00
	Mercer	64	4973	5.00
	Schuylkill	131-140	4974-4983	50.00
	Fayette	63-99	4984-5020	185.00
	Luzerne	137-180	5021-5064	220.00
	Lehigh	46-87	5065-5106	210.00
	Somerset	40-42	5107-5109	15.00
	Beaver	31-42	5110-5121	60.00
	Washington	81-109	5122-5150	145.00
	Butler	39-42	5151-5154	20.00
	Lancaster	117-130	5155-5168	70.00
	Montgomery	142-150	5169-5177	45.00
	Clearfield	36-49	5178-5191	70.00
	Armstrong	28-32	5192-5196	25.00
	Lackawanna	145-173	5197-5227	155.00
	McKean	1-36	5228-5263	180.00
	Venango	9-12	5264-5267	20.00
	Delaware	96-99	5268-5271	20.00
	Cumberland	32	5272	5.00
	Jefferson	1-34	5273-5306	170.00
	Westmoreland	86-94	5307-5315	45.00
	Adams	22-25	5316-5319	20.00
	Berks	104-125	5320-5341	110.00
	Cambria	127-141	5342-5356	75.00
	Philadelphia	1343-1447	5357-5461	525.00
	Allegheny	792-950	5462-5620	795.00
17	Sullivan	1-6	5621-5626	30.00
	Crawford	34-37	5627-5630	20.00
	Huntingdon	31-32	5631-5632	10.00
	Franklin	51-52	5633-5634	10.00
18	Lycoming	93-101	5635-5643	45.00
	Erie	80-81	5644-5645	10.00

Mar. 18	Northumberland	47-53	5646-5652	$35.00
	Tioga	1-22	5653-5674	110.00
19	Bucks	42-57	5675-5690	80.00
	Indiana	21-32	5691-5702	60.00

COMMITTEE ON SCIENTIFIC WORK

Thomas G. Simonton, M.D., *Chairman*
Pittsburgh, Pa.

PROGRAM OF THE MEDICAL SECTION

In choosing subjects for the program of the Medical Section at the State Society meeting in Pittsburgh this fall, the committee has endeavored to cover a wide range, so as to give something of vital interest to all. We believe we have a program well worthy of attention.

Since the symposium type of program has worked out so well in the last two years, it will be retained, but the clinics will be omitted this year. Fifteen minutes will be allowed for discussion following each paper, as heretofore, but a slight deviation has been made, in that the principal speaker will select one of the discussors. There will be a forty-minute period for case reports, each report to utilize five minutes.

The subjects under discussion will include coronary-artery disease; pulmonary collapse; infection in relation to anemia, particularly pernicious anemia; neurologic conditions; physical therapy; and acute rheumatic fever. The last-named subject will be presented by Dr. James Craig Small, of Philadelphia, who has isolated the organism, streptococcus cardioarthritidis, from which he has prepared a vaccine which is supposed to be curative. The discussion of this subject should prove interesting.

For our guest speakers we have been fortunate in obtaining Dr. Louis Hamman, of Baltimore, and Dr. Walter C. Alvarez, of Rochester, Minn. Dr. Hamman's paper will be a consideration of prognosis in a cardiac condition. Dr. Alvarez, the experimental gastro-enterologist of the Mayo Clinic, has not as yet submitted a specific subject, but will give us something worth while along this line.

A very desirable feature about the program this year is that the meetings will be held in Hotel Schenley and the University Club with splendid facilities for obtaining lunch and also a large vacant lot across the street for parking purposes. This will add materially to the comfort and satisfaction of everybody.

With the splendid program planned and the efforts being made to make your stay in Pittsburgh pleasant and profitable, you will do well to arrange to attend the entire session next October.

CALL FOR VOLUNTEER CASE REPORTS AND PAPERS

FOR THE

PITTSBURGH SESSION OF THE MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA

OCTOBER 3 TO 6, 1927

GENERAL MEETING—8 Case Reports of 5 minutes.

SECTION ON MEDICINE—8 Case Reports of 5 minutes.

SECTION ON SURGERY—8 Case Reports of 5 minutes.

SECTION ON PEDIATRICS—8 Case Reports of 5 minutes.

SECTION ON EYE, EAR, NOSE AND THROAT—5 Case Reports of 10 minutes.

SECTION ON UROLOGY—8 Case Reports of 5 minutes.

For publication in the ATLANTIC MEDICAL JOURNAL, the 5-minute case reports will be limited to 1,000 words, and the 10-minute case reports to 1,500 words.

In the General Meeting and Sections on Medicine, Surgery, and Pediatrics, 15 minutes will be allowed for general discussion of these case reports, and 5 minutes for discussion in the Eye, Ear, Nose, and Throat Section.

Volunteer papers, with the titles and abstracts, will be considered by the Committee on Scientific Work on or before May 1, 1927, but the Committee reserves the right to reject a paper if it is not deemed of sufficient merit, or should it not fit in with the skeleton program tentatively planned at its February meeting.

Authors of papers and case reports should send in their titles and abstracts at once to the secretary of the section in which they want to appear, or to the Chairman of the Committee on Scientific Work.

GENERAL MEETINGS: Dr. Thomas G. Simonton, 121 University Place, Pittsburgh, Pa.

SECTION ON MEDICINE: Dr. Jesse L. Lenker, 232 State St., Harrisburg, Pa.

SECTION ON SURGERY: Dr. Harvey F. Smith, 130 State St., Harrisburg, Pa.

SECTION ON EYE, EAR, NOSE AND THROAT: Dr. Curtis C. Eves, 247 S. 17th St., Philadelphia, Pa.

SECTION ON PEDIATRICS: Dr. Zaccheus R. Scott, Westinghouse Bldg., Pittsburgh, Pa.

SECTION ON DERMATOLOGY: Dr. Lester Hollander, Jenkins Bldg., Pittsburgh, Pa.

SECTION ON UROLOGY: Dr. B. A. Thomas, 1900 Spruce St., Philadelphia, Pa.

COMMISSION ON COMPENSATION LAWS

Lever F. Stewart, *Chairman*
Clearfield, Pa.

REFLECTION

Whether conscious of it or not, one of the most persistent human habits is glancing in a mirror. A glance in a mirror is probably the last thing all of us do when prepared to emerge from our apartments to take up the day's tasks. The glance meeting with our approval, we proceed. If the hair has not been brushed, or if the scarf is crooked, adjustments are made, and we go forward with full confidence to meet the problems of the day. The physicians of the State of Pennsylvania can glance in the mirror and find a satisfactory reflection. Certainly in no state of our United States is a higher type of practice being received by a state's citizens, and certainly no country of the world receives such elaborate, careful, and skilled care as do the people of the United States.

To indulge in rather a crude expression, the physician is engaged in an occupation that involves the selling of himself. The manufacturer produces the automobile, the handbag, the umbrella, or what not, and takes a certain amount of pride in it. To condemn his product arouses resentment in abstract form. To condemn what the physician produces arouses resentment of more acute and personal character, for the product the physician is selling is himself. Naturally such a condition would tend to accentuate vanity in the physician; however, vanity is not a common thing among physicians. To the actor, vanity is a heritage or an acquired habit; to the physician it is an exception. The character of the physician's work has led laymen to the belief that all physicians are essentially vain and impractical. Truly this criticism applies to the smallest number of physicians.

Realizing the lack of appreciation of the physician by the laymen when the physician attempts to speak on subjects other than medicine, the Compensation Commission made an effort to discount this condition by impartially criticizing the physician, and offering measures designed to correct the physician's faults while at the same time correcting the faults of our lay-brothers who run to us in the face of illness but are inclined to show little respect for our opinions on things other than disease.

Following presentation of the Commission's recommendations, the Commission has received protests from four county societies. It is truly remarkable that protests were not showered on the Commission from every society. It is the Commission's feeling that the county societies, generally, have felt that they assigned a task to the Commission with the feeling that they would do the best they could under the circumstances. The Commission is properly grateful for the confidence shown. Whether all of its aims are accomplished, it is firm in the conviction that the amendments sought and the manner in which they have been sought are the most practical to meet present-day conditions.

The Commission has met, in the only way it knew how, the hospital-physician's problem so generally existing in Philadelphia, whereby the hospital management refuses to permit the physician to charge for care to patients admitted to wards whether these patients be compensation cases or not. It was not possible to demand legislation compelling hospital managers to sanction the charging of compensation cases by staff physicians, but we have made recommendations that leave no doubt whatsoever as to its being perfectly legal and proper for the staff physician to make a charge. If a hospital management refuses to elect a man to its staff who insists on invoking the privilege of this law, nothing further can be done by law, as the situation becomes one of personal contract between hospital and physician, and there must be some latitude in law that permits of personal contract or agreement between man and institution.

The second big problem has been that of acknowledging the right of the employer to select the injured man's physician. This again is largely a matter of personal contract between an employer or institution and an individual doctor. This has always been part of the law. The Commission would not have included this recommendation with those given the House of Delegates at the 1926 Session had it been familiar with the general objection made to it before the House of Delegates in 1924. The inclusion of this stipulation was made only as a matter of policy. The words used to describe this amendment were unfortunate. It was not then nor is it now meant to give any prerogative to the insurance company. In fact, all through the operation of the Compensation Law, the insurance company has only the rights given the employer, because the insurance company acts only as the employer's agent. Where a condition exists by which an insurance company arbitrarily designates its own physician, it does this with the full consent of the employer. Where such a designation is distasteful to the employer he is in position to object and designate his own physician, and failing in agreement with the insurance company, he is in position to withdraw his insurance and place it with a company that will respect his wishes.

Here again the problem of personal contract can be left unsolved by an employer who is indifferent as to what physician is employed for his plant, or it can be solved by an employer who definitely wishes to designate some particular physician for whom he has repect or whose ability as an industrial surgeon he respects. After all, this condition really falls in with economic practice resulting from daily contacts. The condition includes the natural laws of competition, etc. The big compelling reason for submitting to arbitrary selection on the part of the employer exists in the custom of some large corporations of establishing their own hospitals and maintaining their own physicians on full time in order that they may more quickly and completely care for their own men. It is the custom of many of these corporations to pay no attention to the limitations of our present Compensation Law, and to give fully and freely of medical and hospital care until surgical rehabilitation of their injured men has been made possible. Such broad behavior on the part of our big corporations can receive only universal commendation. Any change in the law which carries employees of these corporations into other equally or more capable hands would defeat worthy enterprises and interfere with business efficiency and, of course, create the utmost antagonism on the part of large business interests in our State. Such antagonism could easily defeat constructive changes in our Compensation Law.

Our third problem has been concerned with a somewhat vague allusion to penalties for failure of the physician to send bills and reports. Unquestionably some physicians have been tardy in giving employers, or their representatives, information concerning their injured men. A spirit of fairness only was the prompting factor in making this provision. These latter provisions were more or less vaguely stated, and were left to the judgment of Mr. Mackey, the State Society's representative, as to the best and most practical way of wording them in phrases suitable to become law.

The Commission is genuinely appreciative of the silent support of the physicians of the State. Although there is no assurance of the passage of any of the amendments, it feels strongly that it has made such fair demands that our Legislature cannot do other than receive them in a reasonable spirit which will lead to their passage.

Reservations for Pittsburgh Session must be made through the Committee on Hotels, Dr. I. H. Alexander, Chairman, Jenkins Building, Pittsburgh, Pa.

County Society Reports

ALLEGHENY—MARCH

The regular monthly meeting was held Tuesday evening, March 15, 1927, at 8 o'clock, at which the following program was given:

James P. Kerr, M.D.: Postoperative Morbidity in Abdominal Cases; Causes and Prevention.—Abdominal operations are performed for a specific purpose: to relieve pain or suffering or to prolong life. If neither has been accomplished the purpose of the surgeon has failed, the operation had not been successful and should not have been performed. If a surgeon, on careful repeated examination, cannot elicit the classical symptoms and recognized signs before operation, he is almost certain to meet with disappointment when he operates. No method of examination can supplant the careful observant study at the bedside where all the physical senses are properly utilized. Too much emphasis has been placed upon the present-day instruments of precision and laboratory findings at the expense of commonsense observant bedside study. These should be used exclusively to confirm the diagnosis rather than to make a diagnosis.

Exploratory operations, because of attendant slight danger to the patient, have become very common in recent years. The exploratory operation should be resorted to only after all other methods have failed. Abdominal operations should follow positive findings and symptoms which indicate demonstrable pathology. The lack of proper preoperative diagnosis is responsible for much of the postoperative morbidity in abdominal surgery. Postoperative morbidity is also due to abdominal surgery instituted for the relief of incurable maladies. Careless surgery constitutes a frequent cause of postoperative morbidity. Abdominal tissue is essentially sensitive, and will not permit excessive traumatism. Postoperative adhesions occur in only a few patients who develop adhesions rapidly and upon the slightest abdominal traumatism. The fallacy of operation for relief of abdominal adhesions should not be tolerated under any circumstances except for intestinal obstruction.

The author concludes that postoperative morbidity usually follows obscure cases where the diagnosis was difficult. More accurate and careful bedside observation before operation is recommended.

W. W. G. Maclachlan, M.D.: Changing Medical Opinion on Some Problems of Duodenal Ulcer.—Duodenal ulcer, as a clinical entity, was not recognized at the beginning of this century. Today it is more often diagnosed, either because it is more frequent or our clinical observation is keener. Our idea of relationship of food toward the pain is reversed. We no longer associate chlorosis and the ulceration. Tuberculosis is not held as a causative factor. Fatal hemorrhage is less frequently encountered than in the past. Surgery has differentiated duodenal and peptic ulceration. Pathology has helped to simplify and classify this disease. The roentgen ray has done more than any single factor in establishing this condition, and today 75 to 95 per cent of cases can be diagnosed in this manner. Previous to discovery of the roentgen ray the diagnosis was based on the symptoms, which at times proved erroneous. Today the main problem is diagnostic, and we are improving our methods for recognition of the disease.

The treatment also has undergone many changes. In order to heal an ulcer completely, dietary rules must be carried out over a period of months or years, and then even slightest indiscretion may cause a recurrence of

symptoms. Failure to obtain fairly prompt relief from symptoms usually indicates a wrong diagnosis. Fibrosis is the usual complication, and scarring causes a mechanical interference with the function of the stomach. After a three-months' trial of the dietetic treatment with no success, surgery is recommended. Strict oral hygiene is advised, and the patient must be moderate in work and play.

Lewis G. Cole, M.D.: Pathology and Classification of Gastric Ulcer.—A timely motion picture film was shown illustrating the pathology of this condition. An appreciation must be extended to Dr. Cole for his labor in preparing and editing this film.

L. G. Beinhauer, M.D., Reporter.

BERKS—MARCH

Dr. L. Napoleon Boston, of Philadelphia, delivered an address on "Abdominal Diagnosis," abstract of which follows:

In making a diagnosis of abdominal disorder, there first should be a careful study of the head, tonsils, sinuses, pharynx, and ears, as many abdominal diseases are caused by infection of these structures. Diarrheas in children and malnutrition are frequently due to disease of the mastoid. A very important diagnostic symptom is the time it takes the food to pass through the esophagus into the stomach. Normally, this should take from three to six minutes, and any change from this time will aid in establishing the nature of the disease.

In cardiospasm, if pressure is made on the lower end of the sternum, the patient will wince. If the patient is given 10 M. of Tr. hyoscyamus, 10 M. of Tr. belladonna, 1 f3 of paregoric, and 10 gr. of soda bicarbonate, the cardiospasm will be relieved and pain will be detected in other organs.

Abdominal anaphylaxis follows the absorption of protein foods and causes pain which will be relieved by 15 gtt. of adrenalin chlorid given hypodermically.

Abdominal angina as a rule is not due to gross pathology, but to high blood pressure. In mesenteric angina, the pain is sometimes on one side, sometimes on the other, but it is always worse in bed.

In outlining the stomach, place the stethoscope on the pyloric end, and by percussing with the fingers or the tuning fork, the stomach can be outlined by auscultation. In gastric ulcer, a localized area of tenderness on pressure can be found by auscultation. Abdominal tension is also an aid to diagnosis.

Clara Shetter-Keiser, M.D., *Reporter.*

BLAIR—FEBRUARY

About one hundred members of the Society attended the meeting held February 22d at Beam's Cafe. The guest of honor for the occasion was Dr. Harold W. Jones, of Philadelphia.

Dr. Jones gave a very interesting and instructive illustrated lecture on blood transfusion. Beginning with the history of the procedure, he showed illustrations of the apparatus used from earliest times down to the present day. He then spoke on indications for blood transfusion, dosage in various conditions and the care necessary in selecting a suitable donor. The lecture was followed by a lively discussion in which several members of the Society joined.

At the close of the meeting, the Jefferson men of Blair County gave a banquet at the Cafe in honor of Dr. Jones.

The next regular monthly meeting will be held in the Altoona Hospital.

R. V. Silknetter, M.D., Reporter.

ERIE—MARCH

At the meeting of March 1st at the Public Library, the Society was honored by the presence of Dr. Arthur C. Morgan, of Philadelphia, President-Elect of the State Medical Society, and of Dr. W. P. Brown, of Philadelphia.

Dr. Morgan spoke first on "The Doctor's Duties," and later on "Cardiac Tragedies," in which he contrasted the diagnosis, symptoms, and treatment of angina pectoris with coronary thrombus and myocardial dilatation.

In angina pectoris the patient holds perfectly still. The pain is high in the chest and may radiate down the left arm (this is the most usual radiation), the right arm, or both arms (this is more unusual). The attack is over before the physician can reach the patient. He may have many attacks. The blood pressure does not fall, and is equal in both arms. Nitroglycerin relieves the spasm.

In coronary thrombus, the pain is substernal, low in the chest under the ensiform cartilage, the patient writhes with pain and is voluble in his description of his sufferings. There is shock, increased leukocytic count, the paralyzed splanchnics dilate the stomach and intestines, and the resultant flatus adds to the general distress. The entire syndrome simulates subdiaphragmatic conditions demanding immediate surgery, and the increased leukocytic count aids this illusion. The blood pressure falls markedly as in any shock, and is unequal in the two arms. Morphin should be given freely in doses large enough to quiet the pain and help the shock. On the day after a coronary infarct a friction rub can often be demonstrated.

Acute myocardial dilatation presupposes a previously disturbed or damaged heart muscle. The boundaries of the heart are enlarged, both to the right and to the left, so that the shape becomes more globular. There are pulmonary edema, râles, and outstanding jugular veins. There may be vomiting in this type of heart pathology, and also in the coronary-thrombus type. There is cough later. In myocardial dilatation, digitalis should be given in large doses. One dram of the tincture by mouth is not too large dosage. Thirty minims every three or four hours may be given until the heart is digitalized. Venesection is also good treatment in this condition. The entire régime of life must be changed; violent exercise forbidden, such as walking against the wind, shoveling snow, running for a car, and so on.

Dr. W. G. Brown, Secretary of the State Antituberculosis Society said that in 1900 there were 200 deaths per 100,000 population, in 1925 this rate dropped to 78 per 100,000. In 1926 there was the same rate of 78. It is evident that more intensive preventive measures must be used to reduce this rate further, as this dead level seems to have been reached in other states besides our own. The Metropolitan Life Insurance Company says there are about 9 active cases in a community for each death from tuberculosis. This disease continues to be the leading cause of death for those between the ages of 16 and 45 years. Any industrial depression may increase the rate higher than the present, which seems to be as low as we can get with our efforts (as they are) for its reduction.

Many patients do not seek medical aid until the disease is hopelessly far advanced. In its earlier symp-

toms it is often most obscure. The physician's first object should be to "sell" the diagnosis to the patient. Dr. Brown advises calling in an internist for confirmation and the use of the x-ray. Change of climate is often helpful. The temperature of the various successful sanatoria varies greatly. It may be 32° at Asheville, 65° in Arizona, or 18° below at Saranac Lake.

In the treatment of patients remaining at home, rest is essential, three good meals a day is better than milk and eggs between meals and no appetite for meals. The patient's room should have the window sashes taken out and canvas screens put in. There may be heat in the room; there really is such a thing as overdoing the fresh-air part of the cure. A definite recommendation of just what to do each hour of the day brings better results than merely the injunction to rest. The patient's meals should be served separately from the family, and his dishes should be different from the family dishes—washed separately and the spoons and forks boiled.

The successful treatment of tuberculosis depends on very careful attention to details.

Anna M. Schrade, M.D., Reporter.

LUZERNE—FEBRUARY-MARCH

A regular meeting was held in the Society building, February 17th, with President G. R. Drake in the chair. Drs. B. J. McGuire, Pittston, M. C. Johnson and C. J. Kistler, Kingston, and T. R. Dorris, Nanticoke, were elected to membership.

Mrs. Edith M. Pierce, field secretary of the Pennsylvania Birth Control Federation, addressed the Society, urging ratification of proposed legislation amending the State law to permit physicians to impart contraceptive information in the regular course of their practice.

Dr. H. G. Fischer: Ectopic Pregnancy.—There is usually a history of one or more missed periods followed by more or less constant bleeding, with cramplike, colicky pains in the pelvis. Pain is the most prominent symptom. Pelvic examination shows a one-sided mass, generally excruciatingly tender, with a uterus enlarged to about the size of a two-months' gestation. Rupture usually occurs, with sharp lancinating pain and a picture of shock. In threatened or incomplete abortion, the bleeding is more profuse and the pain less severe and usually central. Acute pelvic inflammation is usually accompanied by bilateral masses, with a history of gonorrheal, postabortive, or puerperal infection, with higher fever and absence of syncope. Ovarian cysts usually do not cause bleeding and pain, and in appendicitis there are nausea and vomiting with pain located higher, leukocytosis, and higher fever. Intra- and extra-uterine pregnancy may occur simultaneously.

The treatment is never expectant once the diagnosis is established. Only about 33 ⅓ per cent have normal uterine pregnancies later, and about 15 per cent repeat with another ectopic. Treatment is operative, with removal of tissue justified by these statistics. This involves salpingo-oöphorectomy on the affected side.

In a case of combined extra- and intra-uterine pregnancy, operation was performed March 31, 1926, the left tube and ovary being removed. The uterus was the size of a four-months' pregnancy. On September 12, 1926, the patient was delivered of a baby at term by forceps.

Dr. A. W. Friedman: The Prevention of Heart Disease.—Infection is of great importance in the production of cardiac abnormalities. Infecting organisms are the staphylococci, streptococci, pneumococci, various bacilli, and the Spirochæta pallida. Heart disease in childhood is nearly always caused by rheumatic fever, chorea, tonsillitis, or that condition known as "growing pains." In children, the portal of entrance for the germs of rheumatic fever is usually the tonsils and adjacent pharyngeal tissue. A mouth-breathing child should be regarded as an unhealthy child. By applying simple rules of hygiene and proper living, many infectious diseases can be avoided and consequent cardiac complications lessened. Today we segregate the sick, and practice immunization against contagious diseases, both active and passive. Eclampsia, enlargement of the thyroid during pregnancy, and subsequent toxic goiter, all of which affect the heart, are preventable. Myomata of the uterus are known to cause what has been called the "myoma heart." Diseased teeth, sinuses, and tonsils should be corrected. Old infected prostate glands, chronic appendicitis, and chronic gall-bladder diseases slowly but surely affect the heart muscle.

Boys and girls should be examined in school before they are allowed to enter athletic contests. Increased blood pressure is now rightfully considered a compensatory mechanism to maintain the circulation at a high level of efficiency. We should treat the underlying condition—the cause, not the effect.

We should educate cardiopaths to preserve the functional integrity of the already damaged heart. After acute infection, we should insist on rest, to safeguard the heart against incompetence after convalescence. Proper rest is the best means of preventing heart failure.

Dr. H. B. Gibby.—Many cases of ectopic pregnancy are overlooked in the early stages and allowed to continue, with danger to the patient's life. Very few are diagnosed before slight rupture occurs. Of course there is very little pain or discomfort until hemorrhage is produced. I had one case where there was ectopic pregnancy in both tubes, apparently of the same duration. At operation, a fetus was floating around loose in a mixture of blood and clots in the abdomen, about two- to three-months' size. On opening the other tube, we found another fetus of the same size.

In another case the conception occurred in one tube, and there the diagnosis was made at the time of the first pain. The tube was opened, and the patient recovered. Eleven months later, the same thing occurred in the opposite tube. This patient's sister also had a similar experience. Another patient had a recurrence in four years.

From the surgical standpoint the prevention of heart conditions is very important. There are many medical conditions which can be benefited by proper surgical interference at the proper time. The "fibroid heart" is interesting to the surgeon, and it is difficult to decide when and whether to advise operation.

Dr. A. W. Grover.—There are two symptoms of ectopic pregnancy which to my mind cannot receive too much attention and consideration. One is the reaction of the patient to examination. In the majority of vaginal examinations most women bear up pretty well if the physician exercises ordinary care and gentleness. In ectopic pregnancy, however, we have found the patients hypersensitive, almost jumping away from the examining hand, and they are examined only with the greatest difficulty. This should call attention

to the possibility of ectopic pregnancy. Second, if the history is taken carefully, you will find that these women complain of painful defecation because the pressure of the feces and abdominal compression cause pressure on a very painful organ.

Dr. H. A. Fischer.—The reaction of the patient to examination in tubal pregnancy is true. The examination is very painful. I had not heard of the "Grover sign" of painful defecation. The important thing in establishing a diagnosis is to get a history which will usually show one or more missed periods.

The March meeting was held in the Society Building on the 2d, President G. R. Drake in the Chair. Pledges to the endowment fund of the library were reported to total $1,885 to date.

Dr. M. B. Ahlborn: The Significance of So-Called "Stomach Trouble." We see patients who after repeated attacks of chronic appendicitis still get their alkalies and laxatives, and gall-bladder patients who still get their morphin at every attack and their stomach treatment between attacks, though the gall stones and old diseased gall bladder are left to go on with their work of damage to neighboring organs. The statement by the patient that he has "chronic stomach trouble" should be the signal for a thorough history and a complete physical examination. We usually can eliminate the rarer diseases giving gastro-intestinal symptoms, such as crises in locomotor ataxia and hyperthyroidism. We then consider pulmonary tuberculosis, with its stomach derangement, and peritoneal tuberculosis, with pain resembling chronic appendicitis. The circulatory system should be the subject of a very careful study in distress in the abdomen. Nephrolithiasis often is first manifested by a peculiar nausea and sometimes vomiting without other symptoms. Calculus in the right ureter is often mistaken for acute appendicitis. Pregnancy, uterine fibroids, cysts, and other tumors of the uterus and adnexa may give reflex gastro-intestinal symptoms.

The commonest causes for chronic gastro-intestinal symptoms are chronic appendicitis, gall-bladder disease, and peptic ulcer. These have certain symptoms which can nearly always be elicited in the patient's history, and certain points of tenderness in the abdomen which are characteristic. Where trouble is found in the chest, that is in the heart and lungs, this is the internists' problem. The thyroid, appendix, gall bladder, and ulcerations of the small bowel and stomach are surgical, and should be so treated as soon as the diagnosis is made and the indications are clear.

Dr. L. W. Jones: Diseases of the Diaphragm.—Diaphragmatic pain due to inflammation and adhesions is usually referred to the skin segments supplied by the eighth to the twelfth intercostal nerves. Acute inflammation of the pleura or peritoneum is almost constantly attended by restriction in the movement of the diaphragm. Limitation of excursion and increased height of the dome are valuable diagnostic aids in early unilateral pulmonary phthisis. Clonic spasm or hiccough occurs in "indigestion," alcoholic intoxication, bronchitis, acute inflammatory conditions of the abdominal viscera or pleura, pericarditis, meningitis, brain tumor, or apoplexy. These latter cause hiccough by cortical irritation, when it is a bad omen. Paralysis may be central or peripheral, unilateral or bilateral. The latter is more frequent than unilateral, and usually ends in death.

The differentiation of evisceration of the diaphragm, or traumatic hernia, and true hernia, lies in the coverings of the viscus protruding through the abnormal aperture. In true hernia there is a peritoneal coat over the saccular content; in evisceration there is not. The most characteristic symptoms of evisceration are vomiting and hiccough. The fluoroscope is the most valuable means of diagnosis in this condition. The treatment is wholly surgical.

Primary inflammation of the diaphragm occurs in trichiniasis. Hemorrhage into the muscle occurs in the late stages of scurvy. Subdiaphragmatic abscess extends into the thorax in about 75 per cent of cases. The commonest cause is suppurative appendicitis. It is almost always unilateral. Usually the signs are at the base of the chest posteriorly. There is diminished expansion on that side, with obliteration of the intercostal spaces and some bulging of the chest wall. The abdominal signs are tenderness in the upper quadrant with muscular rigidity and no signs of gall-bladder disease (if on the right side). The treatment is surgical.

Dr. Ahlborn: In ruptures of the diaphragm it is remarkable how much material can get through into the pleural cavity. Two years ago a man was brought into the General Hospital. He had been in a hospital in Scranton after an injury, and then went back to work for two months. He came in trying to vomit, and I suggested washing the stomach, but the resident could not get the stomach tube down. We took the patient for an x-ray examination, and gave him barium. With the fluoroscope we saw that the barium was lodged above the diaphragm. At operation it was found that the upper part of the abdomen did not contain any stomach at all. By gentle traction the stomach was pulled down out of the chest. At inspiration the stomach was sucked back up. We closed the hole in the diaphragm and he recovered. He probably had a rent in the diaphragm at the time of the original injury, and this was aggravated by lifting.

Dr. Long: On the other hand, that man may have had a diaphragmatic hernia all the time he was in the hospital in Scranton before he came to Wilkes-Barre. The only way to make a diagnosis of hernia is by x-ray. Thyroid diseases and duodenal ulcers are not always surgical. That they are is a very much mooted question, and it is a question whether more cases are cured by surgery than by medicine. It is a question whether as many thyroidectomies are being done today as there were thirty years ago. Many duodenal ulcers are cured by medical treatment.

Dr. Howarth: It is not easy, even with roentgenographic assistance, to determine whether there is an abscess above the liver or a diaphragmatic pleurisy or empyema is present. We recently had a case in which the empyema was drained off and the patient did well for a while, then relapsed. By the x-ray we tried to locate an abscess above the liver, but found it above the diaphragm.

Dr. Ahlborn: It is nice to point to a long series of duodenal ulcers which have been treated medically for years and years and then get well after operation. I remember a man, intelligent in hospital work, who went to a Philadelphia hospital. He was being treated there for duodenal ulcer by one of their best medical men, who said he thought he could clear up the trouble in two years, but was not sure. At the end of six months he was no better. A surgeon was called in and made a thorough study. He decided that as soon as the patient could be fed up and gotten over the starvation, operation was indicated. The appendix was taken out, and a posterior gastro-enterostomy done. That man is healthy today.

Dr. Jones: When I was an intern we had a boy who came in with symptoms of pneumonia. He had a

metallic tinkling. A diagnosis was made of pyopneumothorax. We needled, and the pressure of respiration forced the piston of the syringe out. We never got pus. At autopsy we found pus, but it was all down in the abdomen.

Lewis T. Buckman, M.D., Reporter.

PHILADELPHIA

February 23, 1927

Clinical Night in Dermatology and Syphilology

Dr. Carroll S. Wright (For Dr. Jay F. Schamberg): The diagnosis and differential diagnosis of lupus erythematosus were detailed.

The old method of treatment by x-ray, with its scarring and telangiectasia, did not produce good results. Carbon-dioxid snow is very painful, and the cure is so slow as to discourage the patient. In 1913 Ruete first suggested the use of gold, but this treatment was not extensively carried out until 1920. Martinstein reports eight cures, four partial cures, and seven cases unaffected after gold therapy. Gold and sodium thiosulphate is the preparation now being used by Dr. Schamberg and the speaker, and results seem to be good. Slides illustrating beneficial effects were shown.

A case of psoriasis of the scalp was introduced to demonstrate the value of a minimum protein diet to effect a cure, and slides illustrated cases cured by this method. The patient is given nothing but orange, tea, small amounts of toast, grapefruit, and applesauce.

Dr. John H. Stokes: Two cases of interstitial keratitis resulting from inherited lues were presented. Dr. Stokes uses this term in preference to the inexact "congenital" lues. In one case, a boy of ten, the cornea had been involved for five or six months, with a resulting vision of 6/20. The effect of the disease on the pituitary was also demonstrated by a mild dystrophia adiposogenitalis—large abdomen, small genitalia, female contour, and a retardation of at least two years in growth. The child also had saber shin—a fusiform thickening of the central portion of the tibia. The other patient, a little girl, after four injections of bismuth arsphenamin, thinks she is worse, but this may be due to a flare-up as the treatment begins to take effect. The ratio of scarring to inflammation determines the prognosis. Persistence of treatment is necessary, and iodids should be given generously—fifty to one hundred grains per day to a boy of ten. Arsphenamin must also be used in large doses. The cases must be watched for early, with especial attention given to every case of "pink eye." By careful treatment relapse has been reduced from 23 per cent to 4 per cent, and blindness has been prevented.

A case of erythematous lupus was next presented. This man exhibited dermatitis and a pinched nose, the facial dermatitis being of seven years' duration, but one month ago it appeared on his arm. He was acutely ill, lost weight, and the chest was involved. Any erythematous lupus with an abrupt ending, a rise in temperature, and an appearance elsewhere is a threatening disseminated lupus, in which disease the mortality is 100 per cent, death occurring after repeated hyperpyrexias, prostration, arthritis, and frequently bronchopneumonia. In such cases the chest must be examined for masses of glands in the mediastinum; and a white blood count, taken repeatedly, especially at the height of the fever, will show a leukopenia (3,000). The white count in the patient presented was 10,000, and the pulmonary signs might have been due to a pneumoconiosis, for the lesions were still discoid, not multiform nor disseminated. The tuberculous background of these cases has been established, the usual site of the tuberculous lesions being in the abdomen, in the mesenteric lymph glands. It must therefore be differentiated from typhoid, erysipelas, pellagra, chronic appendicitis, and cholecystitis. The treatment consists of the administration of large doses of quinin (2-15 grains t.i.d.), since there is extraordinary tolerance for this drug. It is well to have the patient in a warm, dry climate. The gold preparations have not yet been sufficiently tried to report success.

Two cases of osseous lues, one with an opening in the anterior portion of the hard palate, one with necrosis of the upper right alveolar process, were presented. In both, the Wassermann was strongly positive. Such cases must be differentiated from actinomycosis, poisoning from mercury or bismuth, trauma, radium lesion, tuberculosis, chronic osteomyelitis, epithelioma, which last frequently begins in the antrum and perforates the hard palate, and often has a specific background. Biopsy from the mucous surface of such lesions should be made.

Next was shown a woman with firm, nodular, symmetrical, fibrous gummata of the elbow region. Her Wassermann was strongly positive. This lesion may be differentiated from tuberculosis, in that tuberculous lesions are not symmetrical; from calcium deposits breaking down, since they rarely do disintegrate; from xanthoma, by the presence in this disease of a hypercholesteremia; and from psoriasis, in which there is no induration or scarring.

A man, aged 26, was presented to demonstrate an advanced aortic lesion, specific. His primary lesion developed seven years ago, and for four years he had been suffering with angina pectoris, the pain of which now was relieved after six alcohol injections in the region of the cervical sympathetic ganglion. He was early given arsphenamin with relief of symptoms, but it was probably this treatment which, by producing a fibrosis, did more damage than the actual disease. It would have been better had bismuth and the iodids been given first.

Two women came next, both with lesions on their arms, and fingers missing. The first woman lost her finger through primary inoculation of tuberculosis. Her arm lesions, lupus vulgaris erythematodes, are yielding very well to the quartz lamp. Primary inoculation of tuberculosis is frequently diagnosed furuncle, but can be properly diagnosed by the character of lesions in the vicinity and by the presence of a near-by gland in the process of breaking down. With this lesion also a pipestem lymphangitis may occur. On operation or application of the quartz lamp and administration of arsphenamin, these usually clear up, being benign.

The second case fifteen years ago was diagnosed Raynaud's disease because of a number of attacks of gangrenous lesions on fingers and toes. She becomes nervous two or three days before attacks, and goes into trances during which the self-inflicted lesions occur. Were no lesions on the inaccessible parts of the body—a characteristic point in factitial dermatoses in malingering or hysterical patients. Slides, illustrating some of these self-inflicted lesions followed—from application of tar to abdomen, from liniments, croton oil, morphin injections done under septic conditions, lye, trichotillomania.

Dr. Joseph V. Klauder presented cases of ringworm of the feet, a disease which is quite common, dis-

seminated by public shower baths. It looks like a red eczema, with a white, sodden epidermis and occasionally vesicles, and responds to treatment with Whitfield's ointment. Silver nitrate and potassium permanganate are also employed. Attention must be given to hygiene of the feet.

A woman was presented next to illustrate the need for a thorough history and physical examination in cases of pruritus (as also in eczema and urticaria). She was neurasthenic, had had hay fever and asthma, complained of cold hands and feet, constipation, fatigue; her pulse was 70, she was visceroptotic, had a lesion suggestive of incipient tuberculosis, a chilblain circulation, hypotension, eosinophilia of 4 per cent; and while the cutaneous tests were slightly positive to a variety of vegetables, no response was found on their interdiction. She had a moist skin and dermographia. The case was diagnosed vagotonia, and calcium, atropin, and ephedrin were given. No local treatment was employed, but the pruritus, which was due to the sympathetic nervous system, disappeared. The sympathetic nervous system must always be considered in pruritus, urticaria, and eczemas which appear after emotional states.

Two patients were next shown, each with a macular eruption on the trunk. In the first case the lesion was not infiltrated, was slightly scaly, and without itching, pigmentation, or evidence of chronicity. The lesions follow the line of cleavage of the skin. The attack was preceded by a "herald lesion"—a dollar-sized, salmon-colored patch near the umbilicus. A diagnosis of pityriasis rosea was made, a disease with a self-limited course of three to four weeks, etiology unknown.

The second patient had a maculopapular eruption with the same distribution, plus lesions on the neck, forearms, legs, and thighs. There was no itching or infiltration, the lesions finely scaling and in various stages of involution. Duration three months. After the history and physical examination, syphilis was suspected, but the Wassermann was negative, and the lesion was diagnosed parapsoriasis—a condition very resistant to treatment.

Mary A. Hipple, M.D., Reporter.

YORK—MARCH

The March meeting was held in the Professional Building on the 3d, with President E. S. Stambaugh in the chair.

A motion was passed opposing the present birth-control bill before the State Legislature, on the ground that as the bill now reads it will protect the abortionists.

Dr. Burton B. Hamilton, Boston, Mass.: Heart Diseases Complicating Pregnancy.—Hearts do not fail in pregnancy except those that were diseased before. In four years, in the Boston Lying-in Hospital, 20 per cent of all deaths in pregnancy were due to heart failure, mitral stenosis heading the list. In pregnancy, heart ailments can be divided into three groups: the first with marked symptoms, organic disease; the second with systolic murmur, no symptoms or complaints; the third, vague borderline cases, including an occasional presystolic murmur, extrasystoles, paroxysmal tachycardia, and neurocirculatory asthenia. Cases in the second and third class generally behave very well, but those in the first group are serious, particularly if any of the danger signs (cardiac enlargement, auricular fibrillation, marked presystolic murmur, or congestive failure) are noted.

The death rate in these severe cases can be lowered by careful coöperation between the obstetrician, cardiologist, and hospital. Women with mitral stenosis should not bear children, but if they do become pregnant, should be carefully watched in a hospital. If expectoration of blood, or râles at the base of the lungs are noted, the pregnancy should be terminated immediately, the preferable method being cesarean section, when the patient can be sterilized at the same time.

Milton H. Cohen, M.D., Reporter.

The Woman's Auxiliary of the Medical Society of the State of Pennsylvania

Mrs. Samuel Bolton, *Editor*
4701 Leiper Street, Philadelphia, Pa.

COUNTY AUXILIARY REPORTS

ALLEGHENY COUNTY

The meeting held on Tuesday, January 25, 1927, in the Blue Room of the William Penn Hotel was one of rare pleasure to the members who attended. Mrs. John F. McCullough, our president, was in the chair, and introduced first Mrs. R. J. Behan, who, with Mrs. Elsie Breese Mitchell as accompanist, sang a group of three songs: "Sittin' Thinkin'," by Howard Fisher; "My Love He Comes on the Skee," by H. Clough Leighter; and "Reveries," by Harry Rowe Shelley.

Mrs. J. LeRoy Foster, who had Miss Janet Marshall to accompany her, gave an original sketch, "A Trip Around the World." She carried us with her on the strings of her violin to Spain, to Italy, to Turkey, to China, and across the Bay to Mandalay, reading here a bit of Rudyard Kipling's "On the Road to Mandalay," then to France, through Budapest, and back to the U. S. A. and Pittsburgh.

Mrs. Enoch Rauh talked on "The Work of the Department of Public Welfare of Pittsburgh." She gave a short history of the care of the poor in Allegheny County beginning with the year 1700. She then went into a discussion on the work of the Department at present. The four bureaus composing this department—the Social Service, the Mental-Health Clinic, the Department of District Physicians, and Mayview—were explained in detail.

Mrs. Maurice Spiro explained "The Mother's Assistance Fund of the State of Pennsylvania." This is a real work for the children of our State.

Mrs. Foster again read; this time, "If We Had Time," and Mrs. Behan sang "Sunbeams," by Landon Ronald, and "Once in a Blue Moon," by Howard Fisher.

Spring flowers in lavender and pale yellow and lavender ribbon decorated the tea table at which Mrs. Thomas McC. Mabon and Mrs. William B. Ray poured. One hundred and twenty-five members of the Auxiliary had tea, and those absent missed a meeting which for enjoyment and profit cannot be surpassed.

"THE *HYGEIA* COMMITTEE'LL GET YOU IF YOU DON'T WATCH OUT"

(With apologies to James Whitcomb Riley)

The Woman's Auxiliary has surely come to stay,
To keep track of the doctors' wives and sweep their cares away.
To chase the blues from out our hearts, whenever we need fun,

And do a lot of things for us such as we all need done.
And when the work is over and there's nothing left to do
We sit around the board room and think up something new.
And then we talk of *Hygeia* and what it is about—
And the *Hygeia* Committee'll get you when it starts out.

Now once there was a doctor's wife who thought she knew it all;
To make this little stanza rhyme we'll have to call him Hall.
Now Mrs. Hall ne'er read a thing to keep her up-to-date,
And one night when poor Hall was out, oh, very, very late
Alas, 'tis sad as sad can be, Hall Junior took the croup.
Ma fed him on Jack's Salve, which made the baby loop the loop.
Now you and I would surely have made no such mistake;
We read *Hygeia* and we know what's real and what's a fake.

And once there was a doctor who thought no one would know
If he let his subscription slide for just a year or so.
Well, his patients looked for *Hygeia* upon his table there,
And when they didn't find it they started in elsewhere.
Now his office girl heard him coaxing, and the nurse she heard him call,
But when they went to look for him, he wasn't there at all.
And all they ever found of him, was the little sign marked "Out"
And the *Hygeia* Committee'll get you when it starts out.

Now this little tale should tell you what you all can plainly see:
You need *Hygeia* every day as badly as can be.
You need it in your business; you need it in your play;
You need it just to keep in touch with health measures every day.
And when the children are in bed, and everything is quiet,
You can read *Hygeia,* and find out just what should be your diet.
And when you've read it all, clear through, and find what it's about,
The Committee won't have to get you when it starts out.

Mrs. David B. Ludwig.

LYCOMING COUNTY

The regular meeting of the Auxiliary was held in Williamsport, February 11th, at 2 p. m. in the private dining room of the Lycoming Hotel, with the president, Mrs. Wood, presiding.

Routine business was transacted, and the following committee on ways and means was appointed: Mrs. A. F. Hardt, chairman, Mrs. H. P. Haskin, Mrs. John B. Nutt, Mrs. R. K. Rewalt. Officers for the coming year were elected as follows: President, Mrs. L. E. Wurster; first vice-president, Mrs. H. P. Haskin; second vice-president, Mrs. Edward Lyon; third vice-president, Mrs. Galen Casselbury; recording secretary, Mrs. W. Clair Bastian; treasurer, Mrs. George R. Drick. The following directors were elected: Mrs. Kenneth Wood, of Muncy; Mrs. John B. Nutt, Mrs. L. M. Hoffman, and Mrs. W. S. Brenholtz, of Williamsport.

The Auxiliary accepted with great pleasure the invitation from Mrs. A. F. Hardt to hold the May meeting, Friday the 13th, at her home in Vallamont. She will entertain at a one o'clock luncheon prior to the meeting.

The meeting adjourned at 3:30, after which tea was served and cards played the remainder of the afternoon.

Mrs. Ernest T. Williams.

MONTGOMERY COUNTY

The annual meeting was held on February 24, 1927, at the Valley Forge Hotel, Norristown. This was the Auxiliary's second birthday, having been organized February 24, 1926.

Luncheon was called for twelve-thirty. During the luncheon the business of the organization was transacted. Mrs. J. Newton Hunsberger, our state president and a member of the Montgomery County Auxiliary, presented a very beautiful gavel made from cherry wood from historic Valley Forge. A most interesting and instructive legislative report was given by Mrs. John G. Wilson, who is State chairman as well as county. Mrs. H. Allyn, president of Philadelphia county, and Mrs. H. M. Erdman, president of Bucks County, were our guests, and spoke to the members on the work of the organization. There were forty ladies present, ten being new members.

As this was the annual meeting, election of officers was in order. Mrs. Perry W. McLaughlin, Norristown, was elected president, and Mrs. Philip J. Lukens, of Ambler, vice-president. Mrs. H. C. Podall, of Norristown (present State corresponding secretary), was elected secretary, and Mrs. John G. Wilson, Norristown (State legislative chairman), was elected treasurer.

A very enjoyable afternoon of cards followed the luncheon. This meeting was voted by all to have been the most enthusiastic meeting ever held by the Montgomery County Auxiliary.

Mary E. P. Miller (Mrs. George W. Miller.)

THE PHILOSOPHY OF MEDICAL PRACTICE

This is the title of the retiring president's address of the Lycoming County Medical Society, Dr. George C. Davis, published in the *Medical Bulletin* of the county society, and the following abstract seems worthy of reproduction.

At this brief period in passing from the old to the new, it would seem fitting to dwell for a few moments on some of the more important phases of the philosophy of medical practice. In the stress and strife of modern times, commercialism in the business world has undergone an unparalleled development. The profession of medicine has not been entirely uninfluenced by this spirit of commercialism, and while its scientific side has advanced *pari passu* with the attainments in other lines of endeavor, it is doubtful if sufficient attention has been given to the philosophic aspects of our calling.

The physician of the old school was certainly devoid of commercialism, and when we recall how remiss he was in looking after the business side of his work, we must admit that a certain amount of commercialism is an actual necessity in the medical practice of today, both for the good of the physician and that of his patients. Let us avoid, however, the commercialization of medicine to such a degree that the profession becomes a trade, the physician a mere artisan.

It is my belief that the art and practice of medicine are prone to overspecialization. By this it is not meant that the specialist will become too highly specialized, but that the specialties themselves show signs of becoming overcrowded. Almost every prospective medical student today has a specialty in view, regardless of his

adaptability or fitness for that particular line of work. The fact remains that there are some general practitioners who should have become specialists, that there are many specialists who should have found other specialties or who should have remained general practitioners. In the large cities the trend toward specialism is tending to make the profession top-heavy and ill-balanced. The general practitioner is, and must remain, the backbone of the medical profession. His place in the great army of physicians waging warfare against disease, has been aptly likened to that of the infantryman in the military establishment. He is, in fact, the doughboy of the profession, and on his efficiency and well-being, depends the morale of that profession. He must, therefore, realize the responsibilities which rest upon him.

The philosophy of medical practice, in its application, may be subdivided arbitrarily into (1) psychology, as it affects the management of the patient; (2) ethics, governing the relation of physician and patient, and the conduct of physicians one to another; and (3) general morality, as it affects the personal and professional conduct of the physician himself.

Courtesy is one of the essentials of expert treatment, and comprises a thoughtfulness of the patient's welfare and a consideration of his feelings. Coarseness and vulgarity are intolerable in any physician, and are sure to be resented by a patient of intelligence. Success in practice may be said to be the end-result of capability, combined with conscience, courtesy, and common sense. Add to these attributes that of equanimity, and we have the ideal physician. This important quality of evenness of mind, carrying with it the well-poised calm of the man of stable nervous balance and well-directed will, is a powerful element in success.

Let the attribute of courtesy apply as well in the relations of physicians to each other. How pleasant the practice of our profession would be if every physician would exercise thoughtfulness for the welfare of his fellow practitioners. How many physicians today take advantage of the temporary absence or illness of a colleague for what they think at the time is their own gain, illicit and temporary though that gain may be? How often do doctors slur their fellows by direct word or by innuendo? How much do all these unethical practices lower the public estimate of our profession?

The social side of medicine is sadly neglected by a large majority of the profession. To many this would seem of no importance, and while present conditions are no doubt due more to the stress of work than to lack of social inclination, all of us would be much benefited by a more frequent and closer association with our colleagues. We should certainly be more tolerant of each other and there would be far less misunderstanding, due so often to the misquotations of patients, inadvertent or intentional.

The younger members of the profession should be urged to study earnestly and practice faithfully the code of medical ethics; the older members to review it frequently, to obey the dictates of a quickened conscience. May we all study the moral philosophy of medicine.

The Swiss philosopher, Henry Frederic Amiel, wrote in his *Journal Intime* under date of August 22, 1873, "To me the ideal doctor would be the man endowed with profound knowledge of life and of the soul, intuitively divining any suffering or disorder of whatever kind, and restoring peace by his mere presence. Such a doctor is possible, but the greater number of them lack the higher and inner life, they know nothing of the transcendent laboratories of nature; they seem to me superficial, profane, strangers to divine things, destitute of intuition and sympathy. The model doctor should be at once a genius, a saint, a man of God." With this expression as our ideal, may the philosophy of our own lives in medicine be interpreted in the sentiment of a great Russian composer and philosopher: "To regret the past, to hope in the future, and never be satisfied with the present—this is my life."

MEDICAL PRACTICE AND THE UNITED STATES SUPREME COURT

JAMES A. TOBEY, M.S., LL.B.
WASHINGTON, D. C.

"No one has a right to practice medicine without having the necessary qualifications of learning and skill," said a distinguished justice of the United States Supreme Court nearly fifty years ago. This quotation forms a part of the notable opinion of Mr. Justice Field in the case of *Dent* v. *West Virginia*,[1] decided in 1889. It was the first decision by this court on the constitutionality of the regulation of the practice of medicine by the states, and it upheld, by a unanimous opinion of the judges, the right of a state to "exact from parties before they can practice medicine a degree of skill and learning in that profession upon which the community employing their services may confidently rely," and it further held that such legislation, if general in scope, is no deprivation of the due process of law guaranteed to all American citizens.

During the last fifty years the United States Supreme Court has had eight occasions to consider various phases of the legality of state regulation of the practice of medicine. The most recent of these cases[2] was decided, April 12, 1926, while the opinion in the *Dent* v. *West Virginia* case was rendered Jan. 14, 1889. In every instance the constitutionality of medical-practice acts has been sustained. These decisions not only have considered the general authority of the states and the rights of individuals with respect to the practice of medicine, but have taken up such matters as the regulation of osteopathy and mental healing, the legality of the qualifications imposed on practitioners, and the effect of laws exempting certain classes of persons from new requirements. A study of these decisions gives to physicians valuable illustrations of some of the legal principles involved in medical regulation.

Dent v. *West Virginia*, the first of the cases, is the classic which lays down the general principles of law regarding regulation of medical practice. The other cases follow these principles, though also solving certain special problems. The Dent case arose when the board of health of West Virginia refused to grant a license to practice medicine to a physician who was a graduate of the "American Eclectic College of Cincinnati, Ohio," for the reason that this institution was not classed as "reputable" as the board defined the term. The state courts upheld this action, whereupon appeal was taken to the United States Supreme Court, on the ground that the physician had been deprived of a vested property right without due process of law.

This contention was not sustained by the highest tribunal of the nation. While it is undoubtedly the right of every citizen of the United States to follow any lawful calling, business, or profession he may choose, and while this right may in many respects be considered as a distinguishing feature of our republican institutions, the court held, nevertheless, that the power of the state to provide for the general welfare of its people authorized it to prescribe all such regulations as, in its judgment, will secure or tend to secure them against the consequences of ignorance and incapacity as well as of deception and fraud.[3] The court said:[4]

> Few professions require more careful preparation by one who seeks to enter it than that of medicine. . . . The physician must be able to detect readily the presence of disease, and prescribe appropriate remedies for its removal. Every one may have occasion to consult him, but comparatively few can judge of the qualifications of learning and skill which he possesses. Reliance must be placed upon the assurance given by his license, issued by an authority competent to judge in that respect, that he possesses the requisite qualifications.

The court further opined that the medical-practice law, in question was general in scope, applied to all physi-

cians alike, imposed no conditions which could not be readily met, and was enforceable by regular proceedings. As a consequence, it could not be held defective as denying to the plaintiff in error his rights of due process of law and the equal protection of the laws. In conclusion, the court said, "The law of West Virginia was intended to secure such skill and learning in the profession of medicine that the community might trust with confidence those receiving a license under authority of the state."[3]

Ten years later the second case on this subject, *Hawker* v. *New York*,[6] was decided. This decision dealt with the constitutionality of a statute which applied to a person convicted of a felony prior to the enactment of the law. The right of the state to prescribe qualifications for medical practitioners was reaffirmed and it was held that such qualifications might properly include moral as well as scientific standards. Whether the moral requirements could go back to a period before the law in question was passed, in accordance with its terms, presented, however, a rather knotty problem. It was decided, though by a divided court, that such legislation was not *ex post facto*, that a state may not only require good character as a condition of the practice of medicine, but may rightfully determine what shall be the evidences of that character.[7] The commission of a crime, no matter when, was held to have a distinct relation to the question of character, and the legislation should not be considered to impose an additional penalty. To this Mr. Justice Harlan and others dissented, but the majority upheld the ruling.

That due process of law is amply provided for in the regulation of the practice of medicine, even though authority is delegated to a board of registration, was decided by the United States Supreme Court in 1903 in *Reetz* v. *Michigan*.[8] This case also decided that a person who had been practicing medicine when a regulatory act was passed had no right to continue in such practice without a license. In the following year a memorandum, or *per curiam*, opinion affirmed the Kansas case of *Meffert* v. *Packer*,[9] in which the state court had upheld the action of the board of medical registration in refusing to license an individual considered immoral.

The question of prior practice arose again in 1910 in the case of *Watson* v. *Maryland*,[10] which held that a medical registration law is not discriminatory and does not deny equal protection of the laws because its provisions do not apply to those who practiced prior to a specified date, or to gratuitous services, or to physicians in hospitals. In this opinion, the court said:[11]

> It is too well settled to require discussion at this day that the police power of the states extends to the regulation of certain trades and callings, particularly those which closely concern the public health. There is perhaps no profession more properly open to such regulation than that which embraces the practitioners of medicine. Dealing, as its followers do, with the lives and health of the people, and requiring for its successful practice general education and technical skill, as well as good character, it is obviously one of those vocations where the power of the state may be exerted to see that only properly qualified persons shall undertake its responsible and difficult duties.

Osteopathy came before the United States Supreme Court in 1912, when it was decided in *Collins* v. *Texas*[12] that it is intelligible that the state should require of an osteopath a scientific training. The osteopath in the case had treated a patient for hay-fever, without having registered his authority as required by the Texas law. Mr. Justice Oliver Wendell Holmes delivered an opinion which would have ranked high as a medical essay by his distinguished father. In it he pointed out that an osteopath, like others, must begin with a diagnosis, and that for a general practice science is needed. It was further held that a single act is as much the practice of medicine as is continued activity.

Faith healing followed osteopathy in the decisions, and *Crane* v. *Johnson*,[13] decided in 1916, upheld a state law regulating drugless healing, including mental suggestion. "For," said Mr. Justice McKenna, "to treat a disease there must be an appreciation of it, a distinction between it and other diseases, and special knowledge is therefore required."[14] The complainant charged that he was subjected to discrimination in that he as a mental healer was regulated, while Christian Scientists, who used prayer, were exempted. The court held, however, that it was competent for the state to recognize such a distinction.

The position of the Federal Government with regard to the practice of medicine was well brought out in *Linder* v. *United States*,[15] decided in 1925. That case originated as an action against a physician for violation of the Federal narcotic laws, the violation having consisted of the dispensation of certain drugs by the physician. The court held that the narcotic law is primarily a revenue measure and that incidental regulation of medical practice cannot extend to matters plainly inappropriate and unnecessary to reasonable enforcement of a revenue measure. For, said the court, direct control of medical practice in the states is obviously beyond the power of the Federal Government.

The last case pertaining to medical practice decided by the United States Supreme Court was that of *State ex rel Hurwitz* v. *North*,[16] the opinion in which was delivered April 12, 1926. This decision sustains a Missouri law, and the revocation of a physician's license in accordance with its terms. The license in this case was revoked by the board of health on account of the performance of an illegal operation by the physician. The court held that the requirements of due process of law were complied with by the proceedings under the statute in question.

The legal principles advanced in these cases are to the effect that the regulation of the practice of medicine by the state is justified under its police power, which includes the authority to protect the public health; that the legislature may determine reasonable professional and moral qualifications for all practitioners of the healing art; that such qualifications may include criminal acts committed previous to the enactment of the regulatory statute as sufficient cause for refusal of a license; that exemptions may be made in the laws of persons in practice prior to the enactment of the statute, and that the power to administer the act may be delegated to a ministerial board, whose findings and actions are conclusive in the absence of bad faith, such procedure fulfilling the requirements of due process of law. —*J. A. M. A.*, January 29, 1927.

1. 129 U. S. 114, 9 S. Ct. 231, 32 L. Ed. 623.
2. State ex rel Hurwitz v. North,—U. S.—, 46 S. Ct. 384, 70 L. Ed. 406.
3. 129 U. S. 122.
4. 129 U. S. 123.
5. 129 U. S. 128.
6. 170 U. S. 189, 18 S. Ct. 573, 42 L. Ed. 1002.
7. 170 U. S. 195.
8. 188 U. S. 505, 23 S. Ct. 390, 47 L. Ed. 563.
9. 195 U. S. 625, 25 S. Ct. 790, 49 L. Ed. 350.
10. 218 U. S. 73, 30 S. Ct. 644, 54 L. Ed. 987.
11. 218 U. S. 176.
12. 223 U. S. 288, 32 S. Ct. 286.
13. 242 U. S. 339, 37 S. Ct. 176, Ann. Cas. 1916 D. 58.
14. 242 U. S. 343.
15. 268 U. S. 5.
16. — U. S. —, 46 S. Ct. 384, 70 L., Ed. 406.

NEED FOR RURAL HEALTH SERVICE

The Surgeon General of the U. S. Public Health Service reports that 84 per cent of our rural population has no adequate, official, local health service, and that this lack has resulted in a loss of human life and earnings estimated at one billion dollars each year.—*Clinical Medicine and Surgery, March, 1927.*

The average length of human life in the United States is about 56 years. The average span of life in this country has been lengthened approximately fifteen years since 1870.

THE

MEDICAL SOCIETY OF DELAWARE

CONSTRUCTIVE RECREATION IN A RESTLESS AGE*

An Open Door to Normal Life

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Play is not the only door to normal life. It is but one of many doors. The quality of one's grandparents would be another gateway to normality, sound teeth another, and religion yet another. However, this is a neat subject to conjure with, and my first thought is that before being a *door* of any kind, recreation or play, in the broad sense, may validly be regarded as in itself an important aspect of normal life. Surely it is so for the child. Play is its natural, proper business.

Through it, and almost through it alone will the child get that all-round development of those 13,000 million nerve cells with which the physiologists tell us he is endowed at birth, and that growth of muscles and healthy tissue, that vitality of organs, that balance and coördination of physical and mental powers which form the *sine qua non* of happy and efficient living. Everlastingly is it true that the playing child is the health-expressing child, the accomplishing child, the learning child, the joyous child. It is leading the normal life, and that is the only kind it will lead—unless perchance some mischief-making delinquent adult gets in the way. The nonplaying, unhappy child leads a subnormal life. It is really sick, and needs some kind of a doctor.

The playing child is a busy member of society, probably the busiest. It has a big job on its hands. It lives in the present, in the past, and to some extent in the future. By the very powers of inner compulsion it reënacts and gathers in the experience of the race, and the great thing is that it does this, not with displeasure but with pleasure. This is all pictured in colorful fashion by Prof. George E. Johnson in his description of the natural boy. After calling him "a whole menagerie," he declares that this natural boy—

Crawls like a worm,
Creeps like a turtle,
Dives and swims like a frog,
Walks like a quadruped,
Climbs like a monkey,
Runs like a deer,
Squeals like a pig,
Screeches like a parrot,
Hoots like an owl,
Whistles like a mocking bird,
Sings like a lark.

He digs, builds, roams, hunts, pillages, tames wild animals and makes boon companions of dogs.
He dams streams, makes toy weapons;
He descends beneath the waters, under the snow and into the bowels of the earth;
He ascends to the housetops, into the trees and there abides;
He tries the heavens with flying toys, arrows, balloons, kites and äeroplanes,
He conjures with the stars, creates mysteries,
Makes rhymes, composes songs and music, dances and fills the air with unearthly din.
He teases, mimics and acts many parts,
He competes, does stunts, undergoes ordeals, fights, forms gangs, organizes clubs and institutes rituals.
There is no creature in the heavens above or in the waters under the earth which he does not at times become.

I ask you: Breathes there a man with soul so dead who ever in his heart *could* say: This is not the normal life for Willie or, indeed, for Mary? Show me that man and I'll show you one who has lost the spirit of play, the spirit of youth, one who is in decay. He and his ilk are they who contribute so much to what we call our "juvenile delinquency problem." They probably never knew that prescription for growing old gracefully: "Keep limber, loving and a little bit loony." They need it.

But we are traveling a bit fast. And so often does the playing child. While in his doings he is recapitulating the past, he is also conquering the present. He is getting to know his world about him. He is touching it at many points, seeing how it works, using it, learning it in its time and space aspects, finding out what it is made of and more and more of its contents. He is inquisitive. He is a Columbus. He discovers, too, that he is not alone on this earth. There are others. He tries the others out in his play,

*Read before the Medical Society of Delaware, Dover, October 13, 1926.
†Special Representative, Playground and Recreation Association of America.

and is in turn tried out by them. They match qualities and powers. In finding out that these others have egos too, our playing child learns his priceless lesson of give and take, self-control.

He early concludes that in the present is reality. The earth under him is fixed, but he can dig into it and move about on it. The breezes blow and carry things away. The tree branches sway and he can sway with them. The waters flow and upon their bosoms objects float, and he, this playing child, can dive beneath them and around them.

But how well we know that all the boys and all the girls of all the world have not at hand sea and sun, hill and dale, trees and grass, love and cheer. They who have not are the cheated ones. They cannot live the normal life. The "makings" are not there. The playing child is the developing child. He is growing from helplessness to self-helpfulness. He is successfully on his way. He is following the great Creator's program laid out for him.

In his races and competitions the playing youth struggles against obstacles within and without. He learns self-mastery. In his group games he plays a part in a whole: he becomes a coöperating factor in his society, an important factor. His strength and skill are coupled with the strength and skill of teammates against a rival group. He is living under constitution and by-laws to which he himself has subscribed. Nobody forced him into the game; he entered of his own volition, knowing that a government would control him. The government says he must play fair, control his temper, abide by decisions of arbiters. Here certainly is training for life as well as life. Here certainly is education for a later career of accomplishment in the workaday world as well as keen satisfaction in the present.

Courage, loyalty, perseverance, ambition, imagination, judgment, resourcefulness, enthusiasm—all these mental and spiritual qualities does the all-round playing child and youth have inculcated in him. And he likes the process! That's the important thing for us adults to remember: *he likes the process.* Preach at him to be courageous, loyal, persevering, ambitious, etc., and where do we get? Oh, probably *some* of our sermon would get below the skin but how little! We here come to the thought of the sense of duty *versus* the love of duty. The more we study the subject, the more clearly we see that constructive play is one of the most powerful instruments we have for reaching "the very inners" of the growing boy and girl, of tapping their finest resources of personality, and at the same time laying strength on strength for the physical being, by building muscle and nerve force, and coördinating the elements in the bodily machinery for the multitudinous emergency demands which inevitably will be made upon it later.

Says Professor Edward A. Ross: "The playground offers experience in an animated, stimulating miniature society which presents many of the situations one encounters later in adult life. It forms the coöperator, the competitor, the rival, the follower, the comrade."

We are not forgetting, indeed, that these excellencies of result from play cannot all come spontaneously. No, there must be some guiding hand back of it, a knowing intelligence, supervision in the real sense of the word—higher vision. The child has, it is true, a natural instinct for play, but it also has a natural instinct for eating. We do not have to provide the instincts, but both do call for guidance into safe expression, safe gratification, yet not only safe gratification but the best and most fruitful gratification. The right objects and the right channels to them, the right circumstances must be provided. Then will follow the greatest fruits.

And how vitally important is such *supervision* as the adolescent age comes along in our young people, that age when they are no longer children nor yet adults, that nondescript period, that time when the world beckons to them to leave old moorings, the hectic world with its glowing allurements, its sirens, its tinsel and bells, its paste jewels, its fake beauties, its ash-filled apples, its veneered scenery, its call of the wild—and yet with its unblemished beauties and joys and music just around the corner.

Here is the great testing time for youth, yea, the testing time for all the adults who brought youth so far, up to this age. For true it is that if those adults have hitherto done well their part in the training process; if they have all along used constructive play, among other means, as an instrument for the development of right attitudes, for training in personality, in real character, for habituation in joyous, wholesome expression, then at least half the battle has been won. But further guidance is absolutely essential.

For battle it is from now on between the opposing forces in the recreation field. If those who have the destiny of young people in their hands are asleep, then the forces that pollute innocence and damn souls win out. Parents, social and civic leaders must be eternally on their job or *they* face indictment as delinquent.

One of their jobs is to oppose and throttle

to the death those types of amusements which destroy youth. To be specific, I mean indecent commercial dance halls, gambling dens in the guise of something else, rotten movies, most of the traveling carnivals, vile cheap magazines with which the country is flooded, etc., etc.

But this is not their only job. That much is only protection, police work, and the exact methods for carrying it out I am not here prescribing. Their next job is that of understanding the needs of youth as youth, and this is no task for a fool. Here is where real exertion is called for, real sympathy too, and one ought to be able to add, a sense of delightful opportunity ahead.

The inner spirit-mechanism of teen-age human beings is a complicated thing, ofttimes baffling and elusive. To hope to guide it in the young people of this rushing, bustling era, when stimuli beat in upon them hour by hour from a thousand sources that we knew not of in our youth, we adults must know infinitely more than most of us do yet know about human psychology and psychiatry.

Still, even out of our own experience, we should realize that youth loves color, adventure, cheer, social contact, new and interesting experience, yes, music and art, dramatics and handicraft. Yet, how tragically often when it calls for such soul food do we give it a stone!

In a certain Midde West town a group of high-school young people accustomed to hold Saturday night dances in the school hall were denied this privilege by a new incoming board of education. Appeals fell upon deaf ears. "The school was not built for dances. It was built for educational purposes. And, anyway dancing is wrong," said the "wise" elders. So the young people went to the only place open to them, the commercial dance hall connected with a pool room!

In a certain lowly home neighborhood in Chicago, bleak, forbidding, cheerless, with no wholesome recreation places near by and nobody caring, the young folks sought and found their play in the dance halls a mile or two away, where the bright lights beckoned and houses of prostitution flourished. In that home neighborhood tradition had it that if a girl did not go wrong before she was sixteen she was, indeed, a strange human being!

The first step toward delinquency, says Dr. Miriam Van Waters, is usually related to the groping for "heightened experience," in other words, the desire for play. And it is in the beginning a wholesome, a right desire. But it so easily gets frustrated or twisted or misapplied, and then begins the mischief.

We must not forget in our thinking on this subject the needs of the millions of industrial workers in the United States who in their daily work are forced to attune themselves to the inexorable demands of high-speed output, but who yet have so little call made upon them for exercise of large muscles or for creative exertion because they tend automatic machines or merely sew on buttons year in and year out. Because they get no "kick" of satisfaction out of their job, they go after it when off the job, out in the community. Then the important question is, where do they turn? What do they find? What has the community provided? Will they find the types of recreation which, yes, give the "kick" but with it enrichment of life or the types which will veritably kick them to destruction? More and more are the captains of industry realizing that continued efficiency is linked up with wholesome recreation. And we must remember, too, that efficiency is an important constituent in the normal life.

The logic of this whole situation is so clear it hardly needs to be stated for the enlightenment of this particular audience. But for the enlightenment and awakening of the unenlightened, the dull-witted, complacent folk, the untold number of adults who themselves are caught in the whirlpool of our present-day complicated living, we who *know* must crash in upon *their* consciousness with our revealing truth.

The truth we must reveal is that more attention than ever before in our history must be given to the matter of provision of the right kind of recreation opportunities for our young people, the right kind in the right places, under the right auspices. This means careful planning, the application of experience, the skilled manning (of the *super*-vision sort) of programs and departments. There is no higher, finer task for social statesmanship than this. The real thinkers in the fields of health, education, psychiatry, social hygiene, and religion are quite in accord with this opinion. They know that the first eighteen years offer us our great and golden opportunity for giving right set to body, mind, and spirit. They are recognizing that these hungers for expression are legitimate and should be regarded as healthy aspirations, as demands for release from prisons, as burstings of soul force, as keen desires to live the normal life. They know that the balking of these desires or their misexpression spells abnormal life, delinquency. Youth will not be denied.

They know that more than ever strong bodies, reserve nervous force, power of adaptability, and social fitness are needed to meet the demands of a strenuous age, and that constructive recrea-

tion processes offer one splendid way of building them in youth.

They know that today there is vastly more leisure in which, for weal or woe, these desires *will* get satisfaction. That leisure needs to be organized as much as does industry. Comparatively speaking, it is, as many sociologists have pointed out, one of our greatest unsolved problems. Somebody has worked out the conclusion that in a man's lifetime of three score and ten years there are on the whole only twelve solid years for work, but twenty-nine for leisure, and the rest for sleep, and that if it is important to train for work it is therefore more than twice as important to train for leisure. But how woefully inadequately as yet are we providing that training!

Prof. Norman E. Richardson of the Religious Education Department of Northwestern University gives it as his opinion that "the task of training the present generation for leisure is an undertaking, the magnitude of which cannot readily be encompassed even by the most active imagination. No generation in the history of the race has had as much free time placed at its disposal."

Here I call attention, also, to the significant words of that wise woman, whom I have quoted before, Dr. Van Waters, in her book, "Youth and Conflict," where on pages 208 and 209 she is speaking of the place of the correctional school in the reclamation of the delinquents who were permitted to veer off from the normal life. She declares: "It is not too much to say the entire institutional program of the future correctional school will be built around the playgrounds, the gymnasium, the swimming pool, dining room, and sleeping porch.

"In this way will be built up that vigor of life which is necessary to successful adjustment. [Note that: "successful adjustment"; i.e., the normal life]* Within the institution, there should be outlets for self-expression, arts and crafts, dramatic production, pageants, interior decoration, landscape gardening, pottery, weaving, toy-making, and many other things. For the chief contribution of the correctional school cannot be made in the field of morals; what will really count in the outside world is: *how the child learned to enjoy itself in free time?* What does it do when it is *let alone?*"

Dr. Van Waters, you see, would make her recreational *cure* of delinquency so thorough as to cause it to become also a continuing *preventive* of delinquency for the same individuals. The question is pertinent, therefore—Why not in the first instance arrange everything so naturally in the daily life of our youth that they will unconsciously be imbibing the benefits of this type of preventive measure, and thus form, form, form, rather than wait for occasions to reform before we begin to do the right thing.

We have done altogether too much waiting. We need to remember that our total crime bill today, according to some estimates, has mounted to the stupendous sum of ten billion dollars per year. Surely it is high time that we should blazon imperishably upon the skies, for all to read, the truth that one potent, proven means of stemming the tide is to universalize the application of this idea of constructive play.

Our general program, town by town, city by city, must be carefully worked out, in each case to fit the local conditions. But experience proves that to be most effective, it needs to incorporate into its scheme the home, the school, the church, and the community. There must be no loopholes. Each has its part in the ensemble effort. Each must play into the hands of the other. Not one alone, nor two or three of them, but all four are needed if we are to get anywhere. At the center of it all must be organization, to which ever new wisdom should be added. The Playground and Recreation Association of America offers its twenty years' experience to communities for studying their recreational needs, mapping out a workable plan, furnishing and training workers, and continuous advisory service.

The whole issue is so vital to the welfare of our country that it must be grappled with in a large way. The youth of America are so immeasurably precious that we should at any cost in money and effort be joyously concerned to make it possible for them to lead the normal life which is in so large a measure the life of abounding health, the life of creative expression, the life of wholesome comradeship, the life of service, the life of happiness. The normal life, rightly conceived of, is the abundant life.

Physicians of Delaware, you as practiced and ardent preservers and restorers of normal life, are in a strategic position to spread the doctrines I have attempted to expound and to influence aright community action in this important field. I plead for your coöperation. *Vade mecum!*

[The discussion of Mr. Lies's paper will be published in the July issue.]

"Why the mind goes wrong," in five "reasons," is given by Dr. C. Floyd Haviland, superintendent of the Manhattan State Hospital, Ward's Island, as follows: "The tendency of individuals to avoid and evade obstacles and disagreeable circumstances; letting emotions and feelings determine the individual's judgments and guide his actions; excessive depreciation of self and others; irritability and undue suspicion; morbid fears, impulses, envy, hate, and shyness."

REPORT OF A CASE OF PYLOROSPASM*

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On May 10, 1926, Mrs. K., of New Jersey, was delivered, at the home of her mother near Felton, of a 6¾ pound baby. Except that she was 38 years old, and weighed only 80 pounds, which made the labor a little tedious, she had a normal delivery and puerperium. She had had a previous confinement, but the other baby did not live. She left for her home on July 3d. The baby was breast-fed, and at 8 weeks weighed 11 pounds.

I next saw them at my office on August 2d. Everything had gone well until the previous ten days, when the baby commenced to vomit after each feeding. By the time I saw her, the vomiting had become projectile in character. The bowels were constipated, and moved only with laxatives or enemas. The baby was alert, apparently hungry, and very thirsty, drinking much water between feedings. She had the appearance of needing fluids. She still weighed 11 pounds, having lost in the past ten days all she had gained in the previous twenty.

I made a diagnosis of pylorospasm rather than of hypertrophic stenosis of the pylorus, because it was rather late coming on, the loss of weight had not been rapid, showing that some food was getting through, and no tumor at the pylorus was discernible on examination. Therefore, I thought it safe to try medical treatment first.

Dr. Sidney Haas, of New York City, in 1918 suggested the use of atropin in these cases, so I ordered a solution of atropin 1:1000, and started with one drop before each feeding. With this I combined in a modified way the refeeding method of Howland, in that I gave a bottle of water about ten minutes before each feeding, hoping if there was a spasm that it would be over when the baby took the milk.

The result of this treatment was remarkable to me, for the vomiting stopped almost at once and the bowels moved the next day without assistance. Before she went home, however, it was necessary to increase the dose to two drops.

In a letter dated October 7th the mother states that she has increased it now to four drops before each feeding, and for some reason she changed from the breast to Mead's Dextri-Maltose. The baby is gaining nicely.

Another medical measure that is used in these cases is the thick-cereal method of Sauer, who gives food too thick to vomit; therefore if it stays in the stomach long enough it may be there when there is no spasm.

It is very essential not to overlook cases of hypertrophic stenosis in young infants. In these there is a thickening of the muscle and a puckering of the mucosa, besides the spasm. These cases are more acute and more serious. There is a rapid loss of weight, and generally a palpable tumor at the pylorus. In these cases there is no time for delay, but they should be at once sent to the surgeon for a Fredet-Rammstedt operation, which, if done early, is comparatively safe.

You will note in my case, the patient is a girl. Dr. Goldbloom, of Montreal, claims that only one girl is affected to twelve boys.

There is of course nothing new in this paper. My only excuse for offering it is to call attention to a condition that we country doctors rarely see, but the diagnosis of which sometimes means the difference between health and death. I might not have made the diagnosis in this case had I not recently read about it in the course of some general reading.

ABSTRACT OF DISCUSSION

Oliver V. James, M.D. (Milford, Del.): Concerning the physiology of digestion we are told that after the acidity of the stomach reaches a certain point it stimulates the pylorus to relax and allows some of the stomach contents to pass into the abdomen. Until that free acidity is neutralized, the acidity in the duodenum seems to inhibit the passage of any more of the contents of the stomach. The question has occurred to me whether or not in those functional cases that Dr. Bringhurst has just described there is an increased quantity of free hydrochloric acid, or whether the diet of the individual has something to do with this functional disturbance. This is possible, since the condition develops from two to three weeks after the child is born, and in a great many cases it is ushered in with vomiting that gradually becomes worse, and seems to be cumulative and propulsive. In this case, since the baby was breast-fed and the food was not changed, the disorder evidently must have been functional, and the acidity probably had nothing to do with the case.

It is important not to get these cases confused with congenital pyloric stenosis. Most authorities are agreed that unless there is a palpable tumor a trial of medical means is justified for a day or two, except when the patient is so dehydrated that there is little time to spare. Even in such cases the introduction of salines or some other solution to get the patient in better condition is advocated.

The medical profession is not without responsibility in regard to the existing morbidity and mortality incident to childbirth. It behooves us to set our house in order, to encourage the improvement of obstetric practice, to find some means to discourage the careless, incompetent practitioner whose obstetrics are habitually bad, and to enlighten the public, teaching them to demand better obstetric care.

*Read before the Medical Society of Delaware, Dover, October 12, 1926.

EDITORIALS

STERILIZATION OF THE INSANE AND FEEBLE-MINDED

In 1923 the Legislature of Delaware passed a sterilization bill which, according to Governor Robinson, has been so successful that he commended the work in his recent biennial message. In the work, which was only recently started, over 30 patients in the State Hospital have been sterilized under the law, and 96 more are on the list awaiting operation. According to Dr. M. A. Tarumianz, Superintendent of the Delaware State Hospital for the Insane, "It is the plan to sterilize from 150 to 200 every year until all the feeble-minded people in Delaware have been so treated, and thereafter they will be unable to propagate, and the appearance of imbecile, insane, or feeble-minded children in this State will be a thing of the past. Patients so treated become docile, useful citizens, and there is never danger of their committing an outrage. They may be paroled from the hospital with safety, thereby relieving the State of the expense of their care and treatment." In order to carry on the work the hospital trustees are asking the Legislature for $5,000 to equip an operating room.

From what we can gather, such legislation is on the statutes of about fifteen States, and practically has been dropped as a routine in all, with the exception of California. The Legislature of Pennsylvania, during the term of Governor Sproul, passed a bill permitting tubectomy and vasectomy, but on account of religious opposition, the Governor vetoed the bill. A bill was recently introduced in the Nebraska State Senate providing for the sterilization of all inadequate and degenerate persons. The bill describes a socially inadequate person as "one who by his or her own effort, fails chronically in comparison with normal persons to maintain himself as a useful member of organized life of the State." As stated in a recent newspaper editorial, "This is a remarkably inclusive classification. It would seem to take in thousands of harmless citizens of Nebraska, or for that matter, of any other state of the Union. And who is to decide what man or woman of Nebraska is deserving of this legalized mutilation and deprivation of human rights?"

There is no proposition for the control of the feeble-minded receiving so much attention as that of surgical control. There is possibly no agency that has so many advocates pro and con. Eugenists endorse it, some theologists oppose it, while advocates of personal rights and liberties strongly condemn it. Medical scientists are somewhat divided. Of the group opposing it, they do so on the grounds that they regard it as a rather drastic procedure to place in the hands of one individual, or a group of inexperienced individuals, the final decision as to who shall be desexualized, when, and how. The proposition seems too drastic to be haphazardly endorsed, or, through legislative enactment, placed in the hands of a faddist imbued with the idea that the surgical knife will eliminate entirely the feeble-minded from any given state or community. They, however, feel that here again is a possible agency for good, although, unless handled in accordance with definite surgical fixed laws, it will, under misleadership or enthusiasm, be subject to condemnation.

While it may be inferred that fifteen states have legislatively endorsed surgical interference, the world must patiently wait for a final evaluation, until years have placed in our hands reliable data as to the given number of feeble-minded in a given state prior and subsequent to the practice of sterilization. In the interim, mental clinics, diagnoses, correction of physical and environmental conditions, and field supervision, plus hospitalization of repeated sex offenders and the criminal types will be found exceedingly useful.

THE AMERICAN COLLEGE OF PHYSICIANS

The eleventh annual convention, held in Cleveland, just closed, has equaled if not surpassed those of preceding years. The morning clinics held at various hospitals were in the main excellent, and the afternoon and evening papers and addresses of absorbing interest. Cleveland is fast forging to the front as a medical center, and it redounds to the credit of this growing city to have attracted two large medical conventions within one year.

This session of the American College of Physicians was distinguished by the variety of subjects covered and the masterly manner of their presentation. The symposiums on diabetes, diseases of the heart and blood vessels, diseases of the gall bladder and liver, pediatrics, and the central nervous system were worth attending, since the men who participated in them are of high standing and can speak with authority.

It is difficult to single out any one paper as the best, it depends so much on individual interest, but we were particularly impressed by the splendid presentation by Dr. R. W. Scott, of Cleveland, Ohio, on "Syphilis as a Cause of Heart Disease," and "The Pathology of Nephritis," by Dr. H. T. Karsner, of the same city. Dr. Scott demonstrated by a large number of

very fine lantern slides the frequent occurrence of focal invasion of the heart by the syphilitic process, without involvement of other organs; while Dr. Karsner gave an equally lucid demonstration of the histologic basis for the newer conceptions of nephritis. The clinical pathologic conference on unusual cases of heart disease, at the City Hospital, by Dr. Scott, showed how interesting a clinic can be made by a man who knows his subject well and possesses the gift of extemporaneous presentation. Other members of the College with whom we had occasion to exchange impressions, spoke highly of the other papers and clinics which they had attended. These examples show what an abundance of interesting material was to be had by those who were fortunate enough to attend this convention.

As the years roll by, the American College of Physicians is assuming characteristic features which lend to it individuality and definiteness lacking in the beginning. The general principles, as formulated by the College at its inception, did not seem to many to be a strong enough platform on which to build a separate organization.

Any medical organization pledges "to uphold and maintain high standards in medical education and practice; to encourage research, especially in clinical medicine; to foster measures for the prevention of disease and for improving public health; to perpetuate the best traditions of medicine and to maintain high standards of medical ethics; and to maintain the dignity of our profession in its relationship with patients."

However, as one session follows another, and particularly with the adoption of the new constitution, the character of the organization is becoming delineated. Primarily, the College is an association of internists, a term which is gradually attaining a definite connotation. It is obvious that every physician who practices general medicine is an internist, and inasmuch as diagnosis is an essential part of his practice, he is a diagnostician. Up to a comparatively recent time this had been the case. But, as our knowledge of internal medicine has increased largely if not entirely through the discovery of newer and more intricate methods of investigation, specialized training in the application of these methods has become necessary. Blood chemistry, cardiography, the determination of basal metabolism, not to mention radiography, are now indispensable in the diagnosis and treatment of many of the chronic diseases. The general practitioner is not able to handle and utilize this modern machine. He lacks the equipment, the ability to use it if he had it, and the special knowledge to interpret the results even if he could obtain them.

It is these newer advances in the practice of internal medicine that brought forth a new specialist—the internist. He is the man who, by reason of familiarity with the newer methods and their applications, is able to render a greater service to the patient or his attending physician, who may call him in consultation. The very nature of his work demands that he should, like the surgeon, give up lines of practice which are strictly within the province of the general practitioner and which would interfere with his best efforts. Obstetrics or any other of the specialties, the usual type of acute infections and the general run of medical practice are not strictly within his sphere, although there may occur instances when his special knowledge will be required in cases outside of his proper domain. As is the case with other specialists, the internist may be an all or part-time specialist, as circumstances permit, but his qualifications in this his chosen field should be unmistakable, and his special efforts the predominating activity.

With the work of the internist thus defined, we may form a definite conception of the kind and character of membership of the American College of Physicians. Primarily, it should be an association of internists banded for such mutual benefits as they may derive from conventions, clinics, exchange of views, etc., and for the benefit of medicine in maintaining, as it were, a clearing house for the constantly multiplying methods of the study of disease and its manifestations, as well as encouraging research along these lines.

It is interesting to note that during the year just finished, 175 members have been inducted, 134 to fellowship and 41 to associateship. Almost as large a number were turned away, as inadequately qualified for membership.

Perhaps, the most useful function the College can perform at this time is the standardization of hospital practice. The American College of Surgeons has brought about an almost revolutionary change in our hospitals by demanding certain standards of equipment and work before recognition is given. The modern hospital is a different institution from what it had been, owing to the desire for recognition and the effort put forth to gain it. Unfortunately, in most of the smaller hospitals, the effect is evident on the surgical side only, the medical departments remaining in a state of pristine crudity and inefficiency. It is not at all unusual to see a hospital with the surgical department developed to a high degree of perfection in equipment, technic, and management, while the medical department lacks all the essentials of modern practice. This situation should be remedied, and it is up to the

American College of Physicians to do it. By active coöperation with the College of Surgeons, hospital inspections and classification, and promulgation of definite standards, the College will in time bring up the medical departments in our hospitals to a degree of efficiency which will not alone benefit directly the patients who seek hospitalization, but act as a training school for internists.

The American College of Physicians should not be merely a Hall of Fame in which the more prominent members of the profession find a permanent resting place. It must become a vital organization, with definite creative and constructive work to do for the benefit of its members and the advance of medical practice, if it is to justify its existence.

COUNTY SOCIETY REPORT

NEW CASTLE—FEBRUARY

The meeting was called to order by the president, Dr. Charles P. White, and the minutes of the previous meeting were read and approved. No clinical cases were reported.

The chief speaker of the evening was Dr. Jay F. Schamberg, of Philadelphia, whose subject was "The Lead Treatment of Cancer, and the Malarial Treatment of Neurosyphilis." Dr. Tarumianz discussed the latter subject.

Dr. White called for a vote on the proposed amendment to the By-Laws offered by Dr. Tarumianz. Following a short discussion in which Dr. Bastian showed that there had not been any negligence on the part of previous nominating committees in nominating rural members, the amendment, on motion of Dr. Burns, was laid on the table.

A discussion of the Klair Law followed, and Dr. Peter Tomlinson asked Dr. Veasy about the present feeling in Dover. Dr. Veasy replied that he thought it would be a mistake for physicians to go in a body to Dover at this time because of the high feeling aroused over the propaganda for the repeal of the Klair Law. Dr. Tomlinson moved that the physicians, as a body, stay away from Dover at this time. Carried.

An invitation was read from the dentists to hear Dr. Gabriel Tucker, of the Bronchoscopic Clinic of Jefferson Hospital, on March 9th at the University Club, his subject being "The Relation Between Bronchoscopy and Dental Conditions."

A communication from the People's Settlement was read, in which the manager, Miss Sara Pyle, invited the Society to hear Dr. W. T. Grenfell at the Playhouse on March 16th at 8 p.m., and suggested that a committee be appointed to extend to Dr. Grenfell the local Society's recognition of his achievements and be officially present on the stage of the Playhouse the evening of the lecture. Dr. White appointed Drs. Forrest, Robin, and Flinn.

Brice Sewell Vallett, M.D., *Secretary.*

The modern physician believes in prevention of disease. This means that he must believe in and practice constructive health education.

Medical News

Deaths

Mrs. Lita J. Rennie, wife of Dr. W. H. Rennie, of Philadelphia; March 3.

Mrs. Catherine R. Loftus, wife of Dr. John E. Loftus, of Philadelphia; March 16.

John E. Daly, M.D., of Ulster; Medico-Chirurgical College of Philadelphia, 1905; aged 51; February 10.

Samuel D. Jennings, M.D., of Sewickley; Jefferson Medical College, 1868; aged 83; March 8, of nephritis.

Charles A. Gundy, M.D., of Lewisburg; University of Pennsylvania School of Medicine, 1896; aged 54; February 21.

Alpheus W. Gregg, M.D., of Kennett Square; Hahnemann Medical College and Hospital of Philadelphia, 1889; aged 60; March 9.

Ludwig C. Gabriel, M.D., of Pittsburgh; University of Leipzig, Germany, 1888; aged 64; February 11, of cerebral hemorrhage.

Elmer F. Frasher, M.D., of Smicksburg; University of Maryland School of Medicine, Baltimore, 1887; aged 65; recently, of tuberculosis.

George H. Flatz, M.D., of Philadelphia; University of Pennsylvania School of Medicine, 1924; was taking postgraduate work in nose and throat surgery; aged 27; March 10.

Shadrac Raughley, M.D., of Philadelphia; University of Pennsylvania School of Medicine, 1892; member of the medical staff of Frankford Hospital since its foundation in 1901; aged 56; March 8.

Mrs. Violet H. Matzke, wife of Dr. David E. Matzke, of Philadelphia; former supervising dietitian at the Philadelphia Hospital for Mental Diseases, Byberry; aged 27; March 1, following an operation.

Charles W. Saalfrank, M.D., of Philadelphia; Jefferson Medical College, 1886; graduate of Philadelphia College of Pharmacy; physician for many years to the German Protestant Home and the Baptist Home, Lawndale; aged 66; March 5.

James E. T. Oxley, M.D., of Harrisburg; born in Trinidad, British West Indies, in 1884; educated in the Queen's Royal College Port of Spain, Trinidad, and received his degree at the University of Edinburgh, Scotland, in 1910; March 13, of double pneumonia.

D. E. Beltz, M.D., of Ligonier; Philadelphia University of Medicine and Surgery, 1865; oldest member of the Westmoreland County Medical Society; began the practice of medicine as a Medical Cadet during the Civil War; aged 91; March 6, of coronary occlusion.

William H. Wallace, M.D., of Wayne; University of Pennsylvania School of Medicine, 1864; served in military hospitals during the Civil War and later became physician-in-chief of the Department for the Insane in the Philadelphia Hospital; aged 82; March 1.

Births

To Dr. and Mrs. H. M. Kraemer, of Scranton, a son, recently.

To Dr. and Mrs. H. H. Leinbach, of Reading, a daughter, in February.

To Mrs. Edgar T. Shields, widow of the late Dr. Shields, of Harrisburg, a son, March 12.

To Dr. and Mrs. Samuel R. Skillern, Jr., of Cynwyd, a daughter, Anne Hall Ross Skillern, February 16.

Engagements

Miss Louise Dixon, sister of Dr. and Mrs. Edward B. Krumbhaar, of Philadelphia, and Mr. J. Ferguson Mohr.

Miss Shurly Ramsdell, daughter of Dr. and Mrs. Ernest S. Ramsdell, and Mr. Oscar O. Schreiber, both of Philadelphia.

Miss Elizabeth Dorothy Comber and Mr. William Herbert Chandlee, Jr., son of Dr. and Mrs. William H. Chandlee, of Philadelphia.

Marriages

Dr. Bernard Mann and Mrs. Eleanor H. Hartz, both of Philadelphia, February 23.

Dr. Alfred J. Buka and Miss Wilma Audree Ravenstahl, both of Pittsburgh, recently.

Dr. Robert G. Barckley, of Milford, and Miss Ethel J. R. C. Noyes, of New York, January 26.

Miscellaneous

Dr. Thomas J. Cush, of Johnstown, has recovered from a recent operation.

Dr. Richard Mackey, of Waverly, left recently for an extended trip to Africa.

Dr. Lawrence Litchfield, of Pittsburgh, is slowly convalescing from a serious illness.

Dr. Wm. Davies Wallace, Jr., of New Castle, is taking a postgraduate course in Boston.

Dr. Frank C. Parker, of Norristown, has returned from a vacation trip to the West Indies.

Dr. George J. Boyd, of Beaver Falls, has recovered from an illness of several months' duration.

Dr. William S. Bertolet, of Reading, is enjoying a cruise along the shores of the Mediterranean Sea.

Dr. and Mrs. O. G. A. Barker left Johnstown during January for a three months' cruise in the Mediterranean.

Dr. and Mrs. George R. Moffitt and family, of Harrisburg, have returned home after spending several months in Europe.

Dr. Francis T. Carney, of Johnstown, is taking six months' postgraduate work in urology at the New York Post-Graduate School.

Dr. Judson Daland, of Philadelphia, who was operated upon at the Mayo's in March, is making a satisfactory convalescence.

Dr. G. R. Anderson, of Barnesboro, has returned from a cruise in the southern oceans, where he went to recuperate from a severe attack of pneumonia.

Major Edmund B. Spaeth has resigned from the Army Medical Corps, and will take up civilian practice in association with Dr. Luther C. Peter, of Philadelphia.

Miss Mary Henry, superintendent of the Pottstown Hospital for eight years, has resigned to accept a similar position at the Hagerstown Hospital, Hagerstown, Md.

Dr. F. W. Van Buskirk, of Pottstown, who has been confined to bed for several weeks with acute rheumatic arthritis, has again taken up his professional duties.

The will of the late D. W. Seidle, of Carlisle, provides that on the death of his wife, $100,000 from his estate shall be used for the construction of a hospital in Mechanicsburg.

Dr. Charles McDowell, formerly of Latrobe, recently finished a year's postgraduate work in the Army Medical School at Washington, D. C., and has received the commission of first-lieutenant.

Dr. Lillian Malone, formerly field secretary of the National Florence Crittenden Society, Dr. Daniel Yates, and Dr. Agha B. Musa, have been appointed to the staff of the Norristown State Hospital.

On Thursday, March 17, ground was broken for the new building of the Philadelphia College of Pharmacy and Science, which is to be erected at Forty-third Street, Woodland and Kingsessing Avenues, Philadelphia.

Dr. Robert J. Formad, formerly instructor in histology, University of Pennsylvania, is now working as a specialist in rabies in the Bureau of Animal Industry, Department of Agriculture, Washington, D. C.

Dr. Jesse O. Arnold, clinical professor of obstetrics in the School of Medicine, Temple University, has been advanced to professor of obstetrics, to fill the vacancy caused by the death of Dr. John C. Applegate.

Dr. J. Solis-Cohen, of Philadelphia, celebrated his eighty-ninth birthday, February 28. He served in both the army and navy during the Civil War and was surgeon to the Twenty-sixth Pennsylvania Volunteers. He still leads an active life.

Dr. Harry L. Randall, proprietor of a sanitarium at Chestnut Hill, Philadelphia, has been sued for $30,000 damages by Martha M. Heilman, who claims that the physician pushed her to the floor and kicked her so that she was under hospital treatment for two months.

Dr. and Mrs. Richard H. Meade, who have been living in China since their marriage two years ago, Dr. Meade being engaged in medical work, will return to this country in the autumn. Mrs. Meade is the daughter of Dr. Charles H. Frazier, of Philadelphia.

The new nurses home of the Pottstown Hospital, erected at a cost of $90,000, is about ready for occupancy. It is a fire-proof structure of colonial architecture, providing cheerful dormitories, spacious lobby, library, recreation room, and classrooms.

Dr. Robert A. Keilty, who recently resigned from the staff of the Geisinger Memorial Hospital, Danville, will open a private laboratory in Washington, D. C. He has also accepted the position of consulting pathologist to the U. S. Veterans' Bureau at Washington.

It has been announced that a new Hahneman Hospital, seventeen stories high and costing $2,000,000 will be erected on the site of Hahneman Medical College and Hospital, on North Broad Street, Philadelphia. The college will be razed to make way for the new building.

A meeting of the Tristate Conference was held in New York City, February 26. The topic for discussion was "The Assistance Voluntary Agencies can Render Physicians in the Promotion of Public-Health Activities." A report of this conference will appear in a subsequent number of the Journal.

A private viewing of working models of the war memorial being designed by Dr. R. Tait McKenzie, of Philadelphia, and which will be erected in Edinburgh, Scotland, was held at the Art Alliance, Philadelphia, on February 28. Dr. and Mrs. McKenzie were guests of honor at the reception which followed.

Dr. Charles H. Miner, of Wilkes-Barre, formerly Secretary of Health, is taking a month's postgraduate work at the University of Pennsylvania in order to "catch up" on modern medicine, after which he will return to Wilkes-Barre to specialize in internal medicine. He also will be associated with the General Hospital of that city.

Announcement has been made of a gift of $25,000 to the Henry Phipps Institute of the University of Pennsylvania from Charles H. Ludington, of Ardmore, for research work during a twelve-month period beginning July 1. The gift, made with the provision that the Institute raise $50,000, is the second made by Mr. Ludington under the same condition.

Dr. George M. Piersol, of Philadelphia, was reëlected secretary and Dr. Clement R. Jones, Pittsburgh, treasurer, of the American College of Physicians at its recent annual meeting at Cleveland, Ohio. The college named Dr. Charles Martin, Montreal, president-elect, and promoted Dr. Charles Smithies, Chicago, to the

presidency. The next annual meeting will be held at New Orleans.

The United States Civil Service Commission has announced an open competitive examination for Junior Medical Officer (Intern). Application must be on file at Washington, D. C., not later than June 30, 1927. Further information may be obtained from the Commission or the secretary of the board of U. S. civil-service examiners at the post office or customhouse in any city.

Dr. Andrew Knox, Jr., of Philadelphia, who has been critically ill with blood poisoning, is steadily improving since receiving his third blood transfusion. Dr. William H. Crowley gave a pint of blood for the first transfusion and Dr. David J. Boon and the Rev. Frank Duncombe responded to the second call for volunteers. The blood poisoning developed after an automobile accident in Florida in which Dr. Knox was severely injured.

The annual banquet of the Anatomical League of Temple University, held in honor of Dr. Addinell Hewson, professor of anatomy in the Temple University Dental School, took place the night of March 17, at the Benjamin Franklin Hotel. Addresses were made by Dr. Wilmer Krusen, Director of Public Health; Dr. Frank C. Hammond, Dean of Temple University School of Medicine; and Dr. I. Norman Broomell, Dean of Temple University School of Dentistry.

Dr. Joseph F. McCarthy, of New York City, who attended Edward F. Searles, millionaire recluse, at his home in Methuen, Mass., for several months before his death, received a fee of $100,000. Questioned about the payment of this bill, Mr. Searles' lawyer stated that $50,000 of this amount was for services rendered during which time nineteen days were consumed in trips to the patient's home. When asked if he thought this amount was a fair charge for nineteen days, the attorney replied: "It was a charge I was willing to pay."

The William Wood Gerhard Gold Medal of the Philadelphia Pathological Society will be awarded on April 21, 1927, at the annual conversational meeting of the Society, to Dr. Theobald Smith, Director of the Department of Animal Pathology of the Rockefeller Institute for Medical Research. Dr. Smith will deliver the annual conversational lecture on that date, the title being, "The Passing of Disease from One Generation to Another and the Processes Tending to Counteract It." The Gerhard Medal of the Philadelphia Pathological Society was established in 1925 to be given as an award for eminent work in pathology.

The Section on Surgery of the Royal Society of Medicine of England is arranging a postgraduate tour of the United States and Canada, starting July 23d, and including Boston, New Haven, New York, Philadelphia, Baltimore, Washington, Cleveland, Detroit, Ann Arbor, Grand Rapids, Chicago, Rochester, Minn., the Great Lakes, Niagara, Toronto, Ottawa, and Montreal. The facilities of the tour on the same terms will be offered to wives of the members, to other fellows of the Society who are recommended by the tour committee, and to physicians not fellows of the Society, if nominated by two members of the Section and approved by the tour committee.

It has been announced that the American Chemical Society is organizing an Institute of Chemistry to bring together every summer, at a center of technical education, a number of leading chemists from the Nation's laboratories of industry and education. Promotion of science in America is the purpose of the project. The Chemical Foundation, Inc., and Pennsylvania State College have agreed to furnish the funds to put the plan in operation for the first session, to be held at Penn State during July. Northwestern University has requested the privilege of being the second university to coöperate, and the session of 1928 will be held at Evanston, Ill.

The Twelfth Mellon Lecture, under the auspices of the Society for Biological Research, of the School of Medicine of the University of Pittsburgh, will be given this year by Dr. Russell L. Cecil, of New York City, on Thursday evening, May 12th. The subject will be "The Specific Therapy of Pneumococcus Pneumonia."

For the past twenty-one years, Dr. Cecil has been associated first with the department of pathology and later with the department of medicine of one or another of the medical schools in New York. At present he is Assistant Professor of Clinical Medicine at Cornell Medical College and Adjunct Physician at Bellevue Hospital. His chief studies have been in the fields of bacteriology and immunity, particularly as these apply to pneumonia; he has performed research work on experimental influenza and pneumonia. The title of his paper as it appears above indicates his continued interest in these highly important subjects.

Members of the profession and others interested are cordially invited to attend this lecture. The place and hour will be announced later.

Marquette University College of Hospital Administration has announced plans for the holding of the Hospital Clinical Congress of North America the week of June 20 to 24 inclusive, in Milwaukee. The plan is to set up in the Auditorium of Marquette University complete working exhibits of modern hospital equipment, and demonstrate their use under actual conditions. It will be the first attempt to institute a "working" clinic, demonstrating the most modern advances in hospitalization. There will be four distinct departments: hospitals, public health, safety, and research. Dean John R. Hughes, of the College, is preparing the program in conjunction with the advisory committee on arrangements. Special clinical teams will be supplied by hospitals for the demonstration. Each department will be under the special direction of a clinical director.

Dean John R. Hughes of the College of Hospital Administration of Marquette University has announced two special courses in hospitalization. The first, a short course of ten days' duration, will be held from June 6 to 17. The second, a summer course of six weeks, starts on June 27 and ends August 6. The curriculum has been endorsed by the American Hospital Association, by the officers of the American College of Surgeons, and by the American Medical Association.

BOOKS RECEIVED

Outlines of Common Skin Diseases. By T. Caspar Gilchrist, M.D., Clinical Professor of Dermatology, Johns Hopkins University. A manual on the commoner forms of skin diseases met with in general practice. Illustrated with 5 full-page plates. Baltimore: Williams & Wilkins Co. Price, $1.50.

Chininum. A collection of papers concerning the use of quinine, quinidine, and other quina alkaloids. Prepared by the Bureau for Increasing the Use of Quinine, Amsterdam.

Clinical Neurology. By Edward A. Strecker, A.M., M.D., Professor of Nervous and Mental Diseases, Jefferson Medical College, Philadelphia; and Milton K. Meyers, B.S., LL.B., M.D., Neurologist to the Northern Liberties Hospital, Philadelphia. Philadelphia: P. Blakiston's Son & Co. Price, $3.50.

Transactions of the American Proctologic Society. Twenty-seventh annual session held at James Whitcomb Riley Memorial Hospital, Indianapolis, Indiana, April 16 and 17, 1926. Owatonna, Minn.: Journal-Chronicle Company, 1926.

Modern Practice of Pediatrics. By William Palmer Lucas, M.D., LL.D., Professor of Pediatrics, University of California Medical School. New York: The Macmillan Company. Price, $8.50.

Health Supervision and Medical Inspection of Schools. By Thomas D. Wood, A.M., M.D., Professor of Physical Education, Teachers' College, Columbia University; and Hugh Grant Rowell, A.B., M.D., Physician to the Horace Mann School, Assistant Physician, Teachers' College, Columbia University. Illustrated. Philadelphia and London: W. B. Saunders Co., 1927. Price, cloth, $7.50 net.

International Clinics. A quarterly of illustrated clinical lectures and especially prepared original articles. Edited by Henry W. Cattell, A.M., M.D., Philadelphia, U. S. A., with the collaboration of many noted physicians of the country. Volume I. Thirty-seventh series, 1927. Philadelphia and London: J. B. Lippincott Co., 1927.

Gynecological Diagnosis and Pathology. By A. H. F. Barbour, M.D., LL.D., F.R.C.P., formerly lecturer on gynecology in the University of Edinburgh; and B. P. Watson, M.D., F.R.C.S., F.A.C.S., Professor of Obstetrics and Gynecology in Columbia University, New York City. Third edition reprinted. 201 figures and 8 colored plates. New York: William Wood & Company. Price, $4 net.

Surgical Applied Anatomy. By Sir Frederick Treves, Bart. Eighth edition. Revised by C. C. Choyce, C.M.G., C.B.E., B.Sc., Edin., F.R.C.S., Eng., Professor of Surgery, University of London. Illustrated with 162 figures, including 66 in colors. Philadelphia and New York: Lea & Febiger, 1927. Price, $4.

A Textbook of Clinical Neurology. By Israel S. Wechsler, M.D., Assistant Professor of Clinical Neurology, Columbia University, New York. Octavo volume of 725 pages with 127 illustrations. Philadelphia and London: W. B. Saunders Company, 1927. Price, $7.

Physicians of the Mayo Clinic and Mayo Foundations. A series of 635 biographical sketches with 611 portraits and including complete and accurate data concerning the professional life of each physician prior to January 1, 1926. Octavo volume of 578 pages. Philadelphia and London: W. B. Saunders Company, 1927. Price, cloth, $7.

The Diseases of Infants and Children. By J. P. Crozier Griffith, M.D., Ph.D., Professor of Pediatrics in the Graduate School of Medicine of the University of Pennsylvania; and A. Graeme Mitchell, M.D., Professor of Pediatrics, College of Medicine, University of Cincinnati. Second edition, reset. Two octavo volumes totaling 1,715 pages with 461 illustrations, including 20 plates in colors. Philadelphia and London: W. B. Saunders Company, 1927. Price, cloth, $20 net.

The Clinical Interpretation of Blood Chemistry. By Robert A. Kilduffe, A.B., A.M., M.D., Director, Laboratories, Atlantic City Hospital. Philadelphia: Lea & Febiger, 1927. Price, $2.50.

A Manual of Materia Medica for Medical Students. By. E. Quin Thornton, M.D., Assistant Professor of Materia Medica in the Jefferson Medical College, Philadelphia. Second edition, thoroughly revised. Philadelphia: Lea & Febiger, 1927. Price, $4.50.

BOOK REVIEWS

From a reviewer we expect information and advice which will guide us safely and to our profit, warning us of the poor, the mediocre, the commonplace, and inviting our attention to merit.

THE OPHTHALMIC YEAR BOOK, Volume 22, 1926. Edited by William H. Crisp. Published by the Ophthalmic Publishing Company, Chicago, Ill.

There has been no marked change in this volume from those of the past few years. In spite of the great increase in the number of papers published, the authors have attempted to economize space by omitting references which possess no permanent value. This renders a real service, for not only does the *Ophthalmic Year Book* offer a ready source of recent information on any particular subject, but this information has been carefully selected by an editor who has made himself thoroughly conversant with the subject matter.

The tendency, therefore, towards quality rather than quantity is to be highly commended.

REPORT ON THIRD INTERNATIONAL CONGRESS OF MILITARY MEDICINE AND PHARMACY. Paris, April, 1925. By Commander William Seaman Bainbridge, M.C. Reprinted from the *Military Surgeon*, May to August, 1926, inclusive. Washington, D. C.

Lack of space will not permit a review of the many interesting observations found in this report. While most of the communications made by the delegates related to organizations and other technical phases of military medicine, a number of them dealt with subjects of interest to physicians outside this particular sphere, as, for instance, detection of early tuberculosis, the etiology and treatment of traumatic arthritis, analysis of dressing and suture material, and vaccination against smallpox, diphtheria, and typhoid fever. These communications do not appear in full, but are summarized in a manner that makes this report pithy and readable. Several photographic illustrations are included.

PRINCIPLES AND PRACTICE OF CHEMOTHERAPY. With special reference to the specific and general treatment of syphilis. By John A. Kolmer, M.D., Dr. P.H., Professor of Pathology and Bacteriology in the Graduate School of Medicine, University of Pennsylvania. 1106 pages with 82 illustrations. Philadelphia and London: W. B. Saunders Company, 1926. Cloth $12 net.

The relatively new field of chemotherapy is rapidly growing and becoming of increasing practical importance. The subject necessarily concerns every specialty in the practice of medicine and surgery, not only because it deals with the treatment of infectious diseases in general, but of syphilis, in particular. A volume on the subject by Dr. Kolmer is very timely. The first 446 pages deal with chemotherapy, excluding syphilis, under the following parts: Principles of chemotherapy, chemotherapy of bacterial and mycotic diseases, of trypanosomal diseases, of spirochetal diseases other than syphilis, of diseases of doubtful or unknown etiology. Not only is the laboratory status of these subjects thoroughly discussed, with an exhaustive bibliography, but particular emphasis is placed on the practical phases and applications of chemotherapy. The volume is therefore valuable to the research worker, as well as to the practicing physician, and is an excellent correlation of laboratory and clinical phases of chemotherapy.

The treatment of syphilis embraces the last 614 pages. The first part, "infection, immunity, and pathology of syphilis," in relation to treatment, admirably serves to orientate the reader with syphilis as a disease entity. In the following eight chapters under this part is discussed the mechanism of infection with Spirochæta pallida, and the pathogenesis of syphilis in relation to treatment; strains of Spirochæta pallida; immunity; pathology; Wassermann and precipitation tests in relation to the diagnosis, prognosis, treatment, and as an index of cure; the Kolmer complement-fixation reaction; the provocative Wassermann; and cerebrospinal-fluid changes. Under the part, "pharmacology and toxicology of antisyphilitic medicaments," is an exhaustive and complete discussion of the pharmacology and toxicology of the arsenicals, mercury, bismuth, and iodids. In the last two parts—"various methods for the administration of antisyphilitic medicaments" and "prophylaxis, general, specific, and nonspecific treatment of syphilis"—the discussion is essentially clinical,

describes the technic in detail, with excellent illustrations, and gives formulated plans of treatment for the different stages of syphilis. The chapter, "general considerations in the treatment of syphilis" is a succinct, pathologic and clinical visualization of the status of syphilis as an infection, and of its therapy, which can be read with profit, by every physician treating syphilis. The volume is replete with the author's experimentation and clinical experience.

In no other treatise on syphilis is the laboratory and clinical aspects of syphilis so well correlated. The volume is equally valuable to the laboratory worker as a reference and to the clinician as a manual on the therapy of syphilis.

GENERAL SURGERY. By Evarts A. Graham, A.B., M.D., Professor of Surgery, Washington University School of Medicine. Chicago: The Year Book Publishers, 304 S. Dearborn St.

This is a review of the year's work in surgery. In epitomized form the subject has been covered in a remarkable manner. The chapter on surgery of the chest is always of great interest to the surgeon. Especially interesting is the report of a case in which cardiac decompression was performed. The reviewer will report a similar operation very soon. A good chapter is that devoted to abdominal conditions, although nothing new or startling has been reviewed here. Rightly so, much space has been given cholecystography. Brief allusion to the benefits derived from the all-important internal-drainage operations for obstructive jaundice has been noted. In the chapter on fractures, one of the most important time-saving devices mentioned is the Hagie introducer for bands. The reviewer uses a dural separator with a hook on the end of it. The Strauss needles are very practical for use in the syringe method of performing blood transfusions. All other chapters can also be read with benefit by the busy physician or surgeon.

PLASTIC SURGERY OF THE HEAD, FACE, AND NECK. By H. Lyons Hunt, M.D., L.R.C.S. (Edin.). Illustrated with 342 engravings and 10 colored plates. Philadelphia and New York: Lea & Febiger, 1926. Price, $7.

The bibliography is given at the end of each chapter. From 1919 to date, the book is a very interesting historical review and is very interesting reading throughout. The author's descriptions of cosmetic surgery seem clear, but it would have been better if he had been more specific as to which operation he preferred instead of naming several operations to correct the same defect and leaving the selection to the reader. Why must these special books be padded with anatomical cuts that belong in books of descriptive anatomy?

In his cleft-palate chapter, he states that "the detail of the Lane operation has been given, since it or one of its modifications is now most generally employed in dealing with cleft-palate defects." This is certainly not true. Any one who has made a careful study uses it only to close the defect in the hard palate.

INTERNATIONAL CLINICS. By leading members of the medical profession throughout the world. Edited by Henry W. Cattell, A.M., M.D., Philadelphia, Pa. Volume IV. Thirty-sixth series, 1926. Philadelphia: J. B. Lippincott Company.

This volume contains an unusual number of articles by foreign contributors from Munich, Amsterdam, Cherbourg, Vienna, Prague, Zurich, Leiden, etc. All of them are worth reading, covering such subjects as "The Danger of Lumbar Puncture in Cases of Organic Cerebral Lesions," "Acidosis, Coma, and Infection in Diabetes Mellitus," "Aphasia," "Lipoidal Test in Tumors of the Spinal Cord," and "Originating and Passing of Epidemic Diseases." There are other good articles by American authors. The volume carries a cumulative index of the series for 1926. There is also a brief report of the 1926 Cleveland meeting of the Postgraduate Assemblies of North America.

An article on "Practical Notes on Neurotherapy," starting on page 81, betrays a glaring typographical error in carrying the heading on succeeding pages as "Practical Notes on *Neuropathy*," which jars one's sensibilities, as the technical work on this book is usually without flaw.

AN INTRODUCTION TO THE PRACTICE OF PREVENTIVE MEDICINE. By J. G. Fitzgerald, M.D., F.R.S.C., Professor of Hygiene and Preventive Medicine, and Director of the School of Hygiene and Connaught Laboratories, University of Toronto. Assisted by Peter Gillespie, M.Sc., C. E., Professor of Civil Engineering, University of Toronto; and H. M. Lancaster, B.A.Sc., Chief Dominion Analyst, Department of Health, Canada. With chapters by Andrew Hunter, M.A., M.B., F.R.S.C.; A. H. W. Canfield, M.B.; J. G. Cunningham, B.A., M.B., D.P.H.; and R. M. Hutton, B.A. (Oxon.). Second Edition. St. Louis: The C. V. Mosby Company, 1926.

This book contains 792 pages, and is splendidly written. It covers the field of preventive medicine better than any other volume known to the writer. Every general practitioner or internist will do well to procure the book, read it from cover to cover, and have it in his library for ready reference. It is impossible to coöperate intelligently with the public-health officer of the community unless a physician has the information he may obtain by reading a volume such as this.

The numerous subjects are considered in sufficient detail to enable a physician to practice up-to-date preventive medicine, as well as make an intelligent periodic health examination. The authors deserve to be congratulated on supplying the medical practitioner with so timely and useful a volume in this epoch-making period in the history of medical practice.

PHYSIOLOGY AND BIOCHEMISTRY IN MODERN MEDICINE. By J. J. R. MacLeod, M.B., D.Sc.; assisted by Roy G. Pearce, A. C. Redfield, N. B. Taylor, and J. M. D. Olmsted. Fifth Edition. C. V. Mosby & Co., St. Louis, 1926. Price $11.

"Physiology may be considered as an application of the known laws and facts of physics and chemistry to explain the functions of living matter, and it is only after the extent to which this application can be made has been appreciated, that the knowledge may be used to serve as the foundation upon which a superstructure of clinical knowledge can be built." In this book "biochemical knowledge is treated rather from the physiologist's standpoint, as an integral part of his subject, particular attention, nevertheless, being paid to the far-reaching applications of this latest department of medical science in the elucidations of many obscure problems of clinical medicine."

In order to make the volume useful, yet of reasonable size, the authors arbitrarily, but with wise discretion, originally selected certain subjects for treatment, leaving others out altogether. The plan worked well and has been followed in subsequent editions, the problem always being that with which all successful authors have to contend; viz., how to keep introducing the new material without too greatly increasing the size of the book.

In this edition the original purpose of the book, "to serve as a guide to the application of the truths of physiology in the bedside study of disease," has been retained; but it has been expanded, and Olmsted has added a section upon the special senses, and Redfield a section upon muscle-nerve physiology. The other portions of the volume have been thoroughly revised, and many of the chapters, such as those on blood, respiration, ductless glands, and the metabolism of carbohydrates, have been practically rewritten to bring the subject matter in line with recent advances.

(Concluded on page xviii.)



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BOOK REVIEWS

(Concluded from page 480.)

We know some men who keep this book on their desks and refer to it daily—a good practice, tending to accentuate the scientific foundation upon which the practice of medicine ought to be based. For such practical purposes there is probably no better adapted book, or more useful *vade mecum.*

TRANSFUSION OF BLOOD. By Henry M. Feinblatt, M.D., Assistant Clinical Professor of Medicine, Long Island College Hospital, N. Y. Cloth, 135 pages, 24 illustrations. Philadelphia: The Macmillan Co., 1926.

Dr. Feinblatt has placed in our hands a practical manual covering every aspect of modern blood transfusion. The little volume is all modern—a work purged of excess words, technicalities, and obsolete practices. Its sections on physiology, blood grouping, donors, indications, dangers, and methods of transfusion are so arranged that each chapter becomes a ready reference to that phase of the subject. The more recent procedures of transfusion in infants, intraperitoneal, auto-, and exsanguineous transfusion are described and criticized.

The reviewer has not seen Dr. Feinblatt's own transfusion apparatus in use. It is a modification and improvement of the Unger instrument; but like its parent, consists of a special syringe, valves, washers, rubber tubes, angles, and connections. Modern surgical technic demands simplicity plus efficiency. One may predict that the standard transfusion set of the future will consist of Luer syringes; large gauge. personally sharpened hypo needles; two basins of warm saline solution; and two rubber snap bands—all parts interchangeable, and present in unlimited supply in every modern hospital.

DE LAMAR LECTURES 1925-1926. By David Marine, Alice Hamilton, Francis Carter Wood, Fred. W. Sears, Thos. Adams, W. G. Smillie, Edward R. Baldwin, Louis I. Dublin, Joseph Goldberger, C. R. Stockard, Horace Lo Grasso, Robbins B. Stoeckel, and Sir Arthur Newsholme. Baltimore: The Williams and Wilkins Co., 1927.

This volume consists of thirteen lectures delivered by specialists in hygiene and preventive medicine. Each lecture presents outstanding conclusions on the subjects discussed, and affords an interesting avenue through which one specialist can readily obtain the latest thought on the true values of another specialty.

The book is a desirable adjunct to the library of the hygiene worker, the public-health officer, and the teacher of hygiene and preventive medicine. The lectures are written in a manner which makes them readily understood and of interest to the educated layman.

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FOCAL INFECTION IN CHILDREN*†

A. GRAEME MITCHELL, M.D.
CINCINNATI, OHIO

It behooves us on any interesting journey to glance occasionally at the speedometer, reckon up the mileage, and consult the map, else we may, in our enthusiasm, drive past the goal, or, by our carelessness, lose the road. It is well, too, for us to be sure that we are not on the point of running out of gas, especially when we are about to attempt the upgrade of an unfamiliar hill. Somewhat analogous perhaps is our situation with regard to certain problems connected with focal infection. Eager as we are for the journey, let us overhaul our vehicles and see if they can stand the vicissitudes of travel. It is the fate of many things which are good that they are overestimated and the attempt is made to require them to serve beyond their capacity. By correlating clinical and experimental observations I should like to inquire with you whether or not this has been done with focal infection.

Billings, Rosenow, and others have done much in recent years to call attention to focal infection and its results, but the subject is by no means a new one. Pemberton[1] states that pathologic disturbances such as necrosis and caries of the teeth, which are now recognized as points of focal infection, occurred in the Cretaceous period long before the advent of man. Billings[2] says that systemic or general disease due to local infection is a conception as old as medical knowledge. Eyerlin of Christiana[3] in 1789 considered the relationship of diseased tonsils to rheumatism as clinically evident. Duke[4] quotes Benjamin Rush,[5] who details three cases in which he had seen improvement or cure following the extraction of teeth. One of these was a case of arthritis of the hip, one "dyspepsia," and one had been diagnosed epilepsy. Rush says "I have been made happy by discovering that I have only added to the observations of other physicians in pointing out a connection between the extraction of decayed and diseased teeth and the cure of general disease."

We may be permitted to speak with freedom of many diseases and diseased conditions even though we do not have a thorough understanding of their exact causation, but we should at least be able to define just what is in our minds when we employ definite terminology. Billings defines a focus of infection as "a circumscribed area of tissue infected with pathogenic microörganisms. It may be primary, then being located in tissues communicating with a mucous or cutaneous surface, or secondary as the direct result of infection from other foci through contiguous tissues or at a distance through the blood stream or lymph channels." In the focus itself we must suppose that there is an infection which is not active or virulent enough to break beyond the confines of the protective wall which has been set up around it by the formation of fibrinous exudate and the like, but yet an infection resistent enough so that the body defenses cannot entirely overcome it. From these circumscribed areas the bacteria or their products are distributed to other parts of the body in various ways, and thereby cause pathologic changes in tissues distant from their actual location.

In the sense in which focal infection has been defined, it would seem that almost any tissue or organ of the body may serve as a harboring place with a predilection for those in which there is a cavity actually present or one may easily be formed. Among the locations for focal infection mentioned by the many writers on the subject are the teeth and jaws; the tonsils and adenoids; the middle ear and mastoid region; submucous and subcutaneous surfaces, including the finger- and toenails; the bronchi and pulmonary tissue; the genito-urinary tract, including the uterus, tubes, seminal vesicles, prostate, bladder, and kidneys; the gastro-intestinal tract and auxiliary organs of digestion, including the gall bladder and appendix; and the lymph nodes. A partial list of the diseases and disease conditions which are supposed to result from focal infection would comprise acute rheumatic

*Read before the Section on Pediatrics of the Medical Society of the State of Pennsylvania, Philadelphia Session, October 13, 1926.

†From the B. K. Rachford Department of Pediatrics, College of Medicine, University of Cincinnati.

fever, chorea, myositis, vegetative, and ulcerative endocarditis, myocarditis, pericarditis, acute and chronic infectious arthritis, bursitis, neuritis, iritis and other inflammations of the eye, phlebitis, peritonitis, nervousness, spinal myelitis, meningitis, encephalitis, acute and chronic nephritis, pyelitis, acute and chronic appendicitis, cholecystitis, gastric and duodenal ulcer, pancreatitis, severe diarrheal disturbance, gastro-intestinal indigestion, cyclic vomiting, malnutrition, anemia, thyroiditis, erythema nodosum, urticaria, herpes zoster, erysipelas, cellulitis, lymphadenitis, osteomyelitis, pneumonia, pleurisy, empyema, asthma, and septicemia. Perhaps I may be pardoned if I pause for a long inspiration, and ask those of you who are not satisfied to brush up on your nosology by intensive reading of a good medical dictionary.

That such a thing as focal infection exists and is not uncommon is without question. One should be careful, however, not to incriminate every infection in the regions named as the type from which systemic disease can develop. The requirement should be made that the area under suspicion should be so closed that there is no access to external surfaces, or that the conditions present do not allow complete drainage. Having admitted that focal infection is an established fact, it does not necessarily follow that all of the various diseases enumerated are related to it. Before being convinced of this we may reasonably ask for proof. To establish a causal relationship between the two would demand the following evidence: (a) The disease processes supposedly the result of focal infection occur only in persons who harbor such foci or, at least, the incidence in such persons is greater than in those without demonstrable foci; (b) removal of foci results in a cure or improvement of the disease processes and prevents their recurrence; (c) microörganisms or their products recovered from foci can be shown to have specific relationship to the disease processes.

Inasmuch as we are considering this subject only as it applies to children we may first of all determine what are the possible foci of infection in them. It is obvious that some of the sources which must be taken into account in adults are of little consequence in early life. For practical purposes the tonsils, adenoids, teeth, and nasal sinuses are the important ones, other tissues being only occasionally involved in processes which can be called focal in nature. Focal infection and its results are rarely seen in the first two years of life, and seldom before the fourth year. This corresponds to well-known facts. For example, acute and chronic tonsillar infection has a similar age incidence; teeth must suffer from considerable neglect and an extremely deficient diet to manifest caries, periodontal abscess, pyorrhea, and the like in the early years of life; the paranasal sinuses, while present in the infant, are seldom sufficiently developed to harbor infection. In other words, the ideal conditions for chronic infection with inadequate drainage are usually not present in infancy and early childhood. After four or five years of age, however, the case is different. Then tonsils begin to dominate the scene, and the laryngologist orders a new and expensive motor; teeth begin to show evidence of caries, and the dentist, whose nervous system is strained by the cry of children, begins to apologize for his lack of interest in deciduous teeth; respiratory infections are common, and the paranasal sinuses assume importance, thereby furnishing a chauffeur for the laryngologist's motor.

It is difficult to analyze the studies which have been made in focal infection. Those relating especially to children are few and far between. It will only be possible to consider in detail a few of the conditions previously enumerated as those which may be related to focal infection.

It is of primary importance to determine whether *acute rheumatic fever* and its correlatives *chorea* and *endocarditis* belong in this category. The rôle of the *tonsils* in the causation of these conditions may well engage our attention first. A few years ago Dr. Gittings and I[6] presented before this Society a study of about 700 children whom we had personally studied. Tonsillectomy and adenoidectomy had been recommended for all of them by their medical attendants. Ninety per cent of them had tonsils which were distinctly cryptic and moderately or greatly hypertrophied, the remainder having the small, buried type of tonsils. In the history it was ascertained that 8.76 per cent had had growing pains, 3.6 per cent distinct arthritis, and 1.2 per cent chorea. At the time of operation, 2.67 per cent had physical signs of organic heart disease. It is evident for several reasons that these figures mean little in themselves. It is unfortunate that there is no accurate way in which the difference between normal and diseased tonsils can be determined. The personal equation must enter in, and this makes it perplexing to compare the series of different authors. The appearance of the tonsils and their size are the criteria upon which their condition is based. It is obvious that such terms as "cryptic," "ragged," or "congested," and measurements expressed as "small," "moderately enlarged," "greatly enlarged," and the like do not lend themselves to exact analysis. In some investigations the tonsils have been weighed after their

removal, and the bacterial flora contained in them has been determined, but these studies are not so presented as to be helpful in the present connection. Under ideal conditions one would like to have a large group of cases in which it was possible to say that the tonsils were diseased and the seat of focal infection, and a comparable control group with perfectly normal tonsils, with observation of these over a long period of time in order to compare the incidence of the commonly accepted results of focal infection in the two groups. Because of the difficulty of determining normality in tonsillar tissue the control group might well consist of tonsillectomized individuals, although this may raise the question of the function of the tonsils—a problem which it would be profitless to discuss.

Kaiser's investigation[7] was followed out somewhat along these lines, and in so far as it applies, it will be quoted. A group of 1,200 children for whom tonsillectomy and adenoidectomy had seemed advisable and had been performed were examined three years after operation and compared with a control group of the same number of children for whom the operation had also seemed indicated, but on whom it had been refused. In the tonsillectomized group chorea had existed in three children before operation; in the three-year period following, six had developed it. In the control group, chorea had been present in only seven cases. A history of joint pains, growing pains, or actual rheumatism was obtained from 129 children in the operated group, 116 having had their first attack after operation. In the control group the total number of children who gave a history of joint pains, growing pains, and rheumatism was 128. In the group operated on there were 44 children with evidence of heart disease, only 13 of whom developed it after tonsillectomy. In the nonoperated group 52 cases of heart disease were found. These data can be reduced to percentages and tabulated as follows:

Table I

	Operated Group			Nonoperated Group
	Before Operation	*After Operation*	*Total*	
Chorea	0.166%	0.5%	0.66%	0.58%
Growing pains, joint pains, rheumatism	.....	9.66%	10.75%	10.66%
Cardiac disease	2.59%	1.09%	3.68%	4.33%

These figures speak for themselves and need no further comment at the present time.

It seems reasonable to ask a second question, namely, "Does removal of foci of infection effect cure or improvement and prevent the recurrence of the disease processes which are supposedly caused by them?" St. Lawrence[8] observed 85 children, each of whom had presented one or more rheumatic manifestations before tonsillectomy, for an average time of 3½ years after operation. The results were as follows:

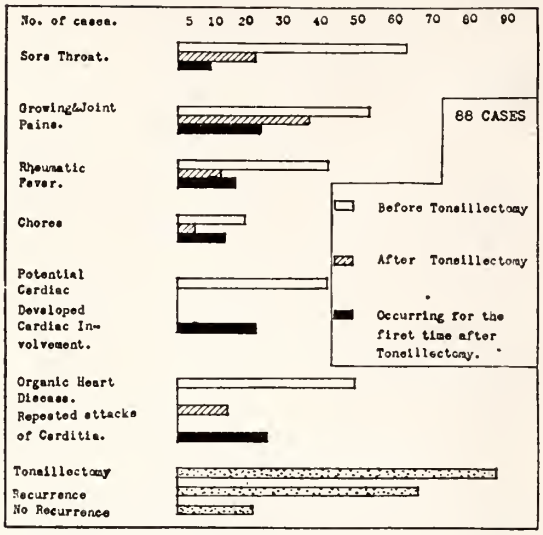
Table II

Before Operation	*Number of Cases*	*Cases Having No Recurrence*
One or more attacks, acute rheumatic fever.	42	25 (84%)
One or more attacks, chorea	40	20 (50%)
Myositis and pains in joints and bones.....	61	47 (77%)
Cardiac failure in organic heart disease....	12	1 (8½%)

At first glance these figures appear to indicate that considerable benefit was derived from the operation. However, what assurance is there that the lessened recurrence of rheumatic manifestations was dependent on the tonsillectomy? Other treatment and hygienic measures instituted during the observation period may have had effect. Furthermore, it is reasonable to suppose that regardless of treatment or operation there might have been fewer recurrences; in other words, it cannot be presumed *a priori* that 100 per cent of the children would have had recurrences in the 3½-year period if their tonsils had not been removed. Much these same remarks apply to the other studies on the effect of tonsillectomy in children. The necessity of interpreting with caution the effect of tonsillectomy is well illustrated by the figures given by Ingerman and Wilson[9] who found that of 88 children with rheumatic manifestations, 76 per cent had recurrences after operation; whereas of 97 children without tonsillectomy, followed for the same period, 80 per cent showed recurrence, a difference of only 4 per cent in favor of the tonsillectomized group. (See Table III on page 484.)

There is another way in which rheumatism may be associated etiologically with diseased tonsils. Some of its manifestations may be linked chronologically with acute inflammation in the throat. This is not an uncommon occurrence, and is well illustrated by the figures of

TABLE III



Relation between tonsillectomy and the occurrence of rheumatic manifestations.

Poynton, Paterson, and Spence.[10] In 172 cases of rheumatism in children there were 22 examples in which it followed immediately on an attack of tonsillitis. In my own experience it is usually secondary or later and not primary rheumatic attacks that occur in such sequence. There are instances, too, in which the tonsillectomy lights up rheumatic disease, again usually only when it has manifested itself in some way before the operation. I cannot recall seeing any case in which the primary rheumatic manifestation immediately followed operation on the tonsils and adenoids.

Besides the gross appearance of the tonsils, the presence in them of microörganisms is of importance. It has been shown by the studies of Davis,[11] Tongs,[12] Pilot and Pearlman and coworkers,[13] Hambrecht and Nuzum,[14] Pilot and Brams,[15] and others that the tonsils harbor such bacteria as the hemolytic streptococcus in 90 per cent or more of the cases in which extirpation seems indicated because of systemic disease. Often present also are the streptococcus viridans, pneumococcus, influenza bacillus, fusiform bacillus and less frequently the diphtheria bacillus, diphtheroid bacillus, streptococcus mucosus and others. These microörganisms are found deep in the crypts in greater numbers than on the surface of the tonsils or on the mucous membranes of the nose, throat, and mouth. To attach significance to these studies it should be known whether supposedly normal tonsils in individuals without manifestations of the consequences of focal infection harbor similar microörganisms, and also whether removal of the tonsils lessens their number. In answer to the first question are studies such as those of Pilot and Tumpeer.[16] These investigators recovered hemolytic streptococci in large numbers in 89.3 per cent of the excised tonsils of 28 children aged 2 to 6 years and in 55.5 per cent of the adenoids from the same children. From swab cultures of comparatively normal throats of 75 children aged 6 weeks to 10 years, hemolytic streptococci were found in sparse numbers in 47.7 per cent. These figures mean little, as the difference in percentage and number could be accounted for by the difference in the method of obtaining the cultures. For example, Tongs (loc. cit.) found in 125 cases positive cultures of hemolytic streptococci in 60 per cent from the tonsillar surface and in 83 per cent from the crypts. In answer to the second query is the investigation of Meyer, Pilot, and Pearlman[17] of cultures from the throats of children from 5 to 15 years of age. Their results may be summarized as follows:

TABLE IV

	Tonsillectomy		*No Tonsillectomy*	
	No. of Children	*Per cent Positive*	*No. of Children*	*Per cent Positive*
Pneumococci ..	49	32.5	68	32.3
Strep. Hemol..	27	40.8	40	60.0
Bac. Influ.....	29	26.5	35	37.1

There are a number of studies of this type in which the results are similar and which demonstrate that tonsillectomy and adenoidectomy, while by no means ridding the nose and throat of potentially pathogenic microörganisms, at least diminish their number. (Pilot and Davis,[18] Nichols and Bryan,[19] Simmons and Taylor,[20] and Tongs.[12])

Up to this point I have discussed only the relationship between tonsillar infection and the rheumatic diseases. I have been unable to find any well-controlled studies in children on the effect of teeth and neighboring structures or the sinuses in causing systemic disease. Many references, allusions, and comments are made in the literature and the number of individual cases and series reported are numerous, but there are no observations comparable with those of Kaiser's or Ingerman and Wilson's on the effect of tonsillectomy. Practically all of the remaining clinical evidence is based on the following method: Given a patient or patients with a diseased condition, the effort is made to find and eliminate areas of focal infection, and the result is recorded. This method of study may furnish valuable clues, provided it is interpreted with a full knowledge of the possible sources of error. Here caution must especially be exerted not to over-

look the natural tendency to recovery which may be operative or the effects of other therapy which is usually carried out coincidently with the treatment of the focus. The psychic effect of operation, fresh air, rest, diet, and the like will all have their influence in the improvement of the patient's symptoms.

In the first two years of life the *teeth* are seldom the seat of abscess, and periodontal infections are uncommon. The teeth usually emerge in good condition, even though there has been improper feeding in the first months of life or the diet of the mother during pregnancy (an overestimated factor) has been faulty. By five or six years of age, however, many children have dental imperfections of some type. Although there is no lack of proof of the frequency of local dental disease in childhood, I would be inclined to take *cum grano salis* the statement that one third of the younger school children suffer from dental abscess (Snyder[21]). It would be a waste of time to attempt to quote the clinical studies on this phase of the subject. They usually present the type of experience which has happened to all of us. We have all seen improvement in certain diseased conditions after the extraction or treatment of teeth. We have all had, too, a healthy number of the disappointments which follow the removal of supposedly causative foci in or about these structures. It is particularly the failure to modify favorably rheumatic manifestations which has led me personally to be somewhat skeptical of any great influence of the teeth on such diseases. It is rather in the more chronic arthritides and in such conditions as chronic pyelitis that good results may with more hope and reason be expected.

We have heard a great deal about pyorrhea alveolaris and its dangers. It seems to me that here again the evils have been overestimated so far as effect on remote tissues is concerned. There may be in pyorrhea a chance for free drainage, so that there need be no absorption from the infected areas. When, however, the alveolar tissue beneath the periosteum is involved, an ideal focus is established. Of all oral infections, too, it is especially in pyorrhea that the gastro-intestinal tract might be affected by the swallowing of large numbers of potentially pathogenic microörganisms. Under normal conditions it is likely that most of these would be destroyed in the stomach before much damage had occurred. To say that these microörganisms might gain access to the blood by passage through the intestinal wall again implies abnormality, and brings us back to the realm of speculation.

There is a type of *severe diarrheal disturbance* often called intestinal intoxication in which the gastro-intestinal tract apparently is involved secondarily to an upper respiratory infection. Renaud,[22] Byfield,[23] Floyd,[24] Marriott,[25] Jeans,[26] and Jeans and Floyd[27] have called attention to it. Marriott emphasizes especially the importance of unrecognized streptococcic infection of the mastoid, and Floyd and Jeans the sinuses, and all three of them note the almost immediate relief of symptoms which follows drainage of these regions. That such cases occur is unquestioned, and they are usually designated as parenteral infections; that they account for all or even most of the severe acute nutritional disturbances in infancy many pediatrists are not yet ready to accept.

The relationship of focal infection to nephritis has been the subject of a large number of papers. By some authors it has been called "focal nephritis," and has been considered to be a specialized type. Hench,[28] for example, has found as the only positive symptoms albuminuria, hematuria, and at times cylindruria, systemic evidence of renal insufficiency being absent. Following removal of distant foci, these symptoms often disappeared. Calvin, Isaacs, and Meyer[29] have discovered that the incidence of albuminuria is much higher in children in poor hygienic surroundings, who have many untreated foci of infection and are for the most part anemic and undernourished. They believe these factors play a rôle in the causation of the albuminuria, but they are careful to insist that carious teeth and infected adenoids and tonsils are not, so far as they can determine, the specific causes, correction of such defects resulting in improvement in the albuminuria mainly in so far as it helps to produce general improvement.

A very definite connection between sinus disease and nephritis has been brought forward by Marriott and Clausen,[30] Aldrich,[31] and Jeans.[26] Clausen presented the results of his studies before this Society last year. He found that parenchymatous or tubular nephritis (nephrosis) was frequently caused by staphylococcic infection, usually in the nasal sinuses, improvement in the condition quickly occurring when the sinuses were drained. In hemorrhagic glomerular nephritis, on the other hand, the causal infection was most frequently found in infected tonsils or teeth, treatment of these being effective.

Time will not permit presentation of clinical evidence of the causal connection between foci of infection and certain other diseases such as pyelitis, streptococcic and pneumococcic peritonitis, osteomyelitis, inflammation of the mesenteric glands (Brennemann[32]), and the like.

Suffice it to say that it is all of the type previously mentioned and based upon two sorts of observation, namely, a close chronological connection, and the results of treatment or extirpation of foci. In so far as this kind of experience is conclusive there can be no doubt that focal infection may cause remote disease, and it is especially in this connection that chronic arthritis should be mentioned.

No discussion of focal infection would be complete without mention of Rosenow's studies on the elective localization of the streptococcus-pneumococcus group of microörganisms. These investigations have been confirmed by others, such as Price, Meisser and Bumpus, Haden, and Livingston,[33] and even those who have not been able to repeat all of Rosenow's work admit that in some cases, at least, microörganisms isolated from foci of infection produce pathologic changes in experimental animals identical with the lesions found in the patient from whom they were obtained. Rosenow's studies began as early as 1909;[34] they are well summarized in later publications.[35] Briefly, they are as follows: Endocarditis, characterized by the formation of massive vegetations, was produced in rabbits by the intravenous injection of streptococcus viridans isolated from the blood of patients with septic endocarditis; pneumococci and streptococci from patients with endocarditis localized on the heart valves of rabbits; microörganisms isolated from the joints in acute rheumatism when injected into animals had affinity for joints, endocardium, pericardium, and also myocardium and muscles; streptococci from the tonsils and teeth of patients with acute rheumatic myositis produced similar lesions in rabbits which were often localized in the same group of muscles as in the patient; cultures from patients with impaired myocardial conduction produced in animals lesions in the myocardium localized especially in the bundle of His, with the development of arhythmia. Other specific localization was shown by intravenous, intraperitoneal, or intracranial injection, or by introduction into the respiratory or intestinal tract in which the lesions were not only in the same tissues in the animals as in the patients but the microscopic character of the lesions was similar and microörganisms could be demonstrated in them. Among these may be mentioned nephritis, epidemic hiccough (localization in the diaphragm), appendicitis, gastric ulcer, cholecystitis, neuritis, and the like.

To understand just what Rosenow means by elective localization, one of the studies may be quoted in more detail.[36] Twenty-four strains of streptococci from patients with rheumatic fever produced arthritis in 66 per cent, endocarditis in 46 per cent, pericarditis in 27 per cent, and myocarditis in 44 per cent of the 71 animals injected, in contrast to an average of arthritis in 27 per cent, endocardial lesions in 14 per cent, pericarditis in 2 per cent, and myocarditis in 10 per cent of animals injected with microörganisms from other sources. Eight strains of streptococcus viridans from patients with chronic septic endocarditis produced lesions in the endocardium in 84 per cent of 44 animals injected, in contrast to 15 per cent with strains from other sources than those from endocarditis. Davis[37] has somewhat similar figures, and found that the hemolytic streptococcus obtained from extirpated tonsils of 28 patients with rheumatic manifestations, ranging from simple articular pains to chronic arthritis but including typical acute articular rheumatism, were virulent for rabbits, invariably locating in or about the joints and producing multiple arthritis. Only occasionally was there localization on the heart valves. Pneumococci obtained in the same way rarely produced arthritis, but frequently localized on the heart valves.

The favorable effect on certain disease conditions of vaccines made from the microörganisms in tonsils, teeth, sinuses, and the like has been brought forward as an argument in favor of the etiologic significance of focal infections. The successes could be explained on other grounds than specificity, such as the effect of foreign protein; the failures on the fact that the microörganisms in the lesions had undergone change so that vaccines made from the site of the focal infection would fail to contain proper antigen (Rosenow).

Comments and Conclusions

Because I have been primarily concerned with the possible effect of focal infection, I have not mentioned the way in which it may act. Whether the spread from the focus is to distant tissues by blood or lymph stream, whether it is the bacteria themselves or their products which do the damage, whether anaphylaxis, lowered sugar tolerance, or other factors play a part, are all subjects of interest, but do not concern us at the present time.

An attempt to analyze the great mass of literature on focal infection, only a minute part of which has been presented in this paper, will probably result in making hash out of potpourri, and the amount of sustenance to be derived from either of these heterogeneous mixtures is, of course, always problematical. I have purposely refrained from citing personal cases because they can be assembled so as to argue pro or con. It is easy to recall in one's experience spectacular

results following treatment or eradication of foci and it is just as easy to quote failures.

The attempt to explain the failures of the theory of focal infection has stimulated the ingenuity of its advocates and has led to reasoning which in some cases is more or less substantiated by fact or suggested by probability. It is apparent, for example, that the removal of one demonstrated focus may have no effect if others exist and remain. Foci may readily be multiple and, in fact, the presence of one often predisposes to others. Thus any infection in the tonsils and adenoids may encourage disease of the middle ear and nasal sinuses; a secondary localized abscess may persist in adjacent lymph nodes after the primary focus has been removed; or diseased teeth may lead to infected maxillary sinuses. It is clear, too, that more or less permanent destructive changes may have taken place in tissue and a return to normal therefore may be impossible even though the focus of infection originally responsible be properly treated. Also it does not necessarily follow that a focus which has been operated on is eradicated, and this is especially true in regard to the tonsils and adenoids, parts of which are not infrequently found after operation. It is very necessary to explain the well-known fact that infection of the type which may be called focal in nature is of very frequent occurrence in individuals who do not suffer systemic effect from it. Several reasons probably exist for this, some of which must be expressed more or less vaguely. The presence of pathogenic microörganisms in the body does not always cause disease; there may be a natural or acquired immunity which prevents this. It is probable that a hereditary tendency exists to certain diseases and that this must be present in addition to the presence of an exciting or predisposing cause. For example, there quite certainly is such a thing as a rheumatic diathesis and very possibly others. So, too, lowered resistance, general in nature or local, as by trauma, may be necessary to assist the action of focal infection. Areas of focal infection vary in their local condition so that absorption of bacteria or their products may or may not be possible. In addition, we may always lean on the helpful crutch of "variation in the virulence of the microörganisms."

With all these variable factors in mind, how are we to interpret the status of focal infection? In the light of present knowledge are we to rest assured of the causative effect of focal infection in the many disease conditions for which it has been held accountable? Are we to proceed on a campaign of wholesale removal of supposed foci? What results are we to expect from eradication and treatment of foci? I can only suggest the answers to these questions.

Focal infection in the sense in which it has been defined certainly exists. In view of clinical experience and experimental study there can be no doubt that certain pathologic changes can be cured or improved by eradication of foci of infection. The evidence in hand indicates that in some of these cases the foci are causative; in others their removal acts only by effecting a coincident improvement in the patient's general condition. In either event their eradication is often indicated after careful study of the individual case. It is in chronic conditions such as arthritis, nephritis, pyelitis, and the like that the etiologic significance of focal infection is best established and proper treatment of the foci offers the best therapeutic results provided the pathologic changes in the tissues are not too far advanced. Even if foci are responsible for such diseases as acute suppurative peritonitis or epiphisitis, the knowledge that this is the case helps little in the presence of the infection. While animal experimentation suggests that focal infection plays a part in the causation of acute rheumatic fever and chorea, clinical study does not warrant the conclusion that removal of tonsils and adenoids or the treatment of dental infection offer any definite protection against the occurrence or recurrence of these diseases. Cardiac disease including myocarditis, pericarditis, and endocarditis, seems, both by experimental and clinical study, to bear a somewhat closer relationship to focal infection than do the other so-called rheumatic manifestations.

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Symposium on Hysteria*

A CASE OF MULTIPLE PERSONALITY

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The term "personality" embraces those mental and emotional attributes which constitute the ego. It is that mental state by which an individual realizes his own personal identity. In other words, personality is a consciousness of self—the knowledge that "I am I." When the elements which constitute this personal identity, or ego, are interfered with, a cleavage, or separation in the identity mechanism may take place. The original personality is then pushed aside, or is held in abeyance, by an independent grouping of the elements of consciousness. This new grouping constitutes a so-called second personality. The cleavage, or splitting, may go on to further subdivisions of consciousness, producing two or more personality states, each of which carries out its own existence independent of the others.

It is only a similar kind of cleavage, though in lesser degree, which gives rise to the more familiar hysterical pictures of organic disability—a paralyzed limb, blindness, deafness, etc. When these latter somatic or bodily symptoms occur, there is a cutting off of only a part of the individual's control of his organism. There has not been actual disruption of his total sense of identity. In these cases of hysterical organic dysfunction, the mind is cut off from control only of some fractional portion of the body, but retains its sense of identity. In multiple-personality states, however, the mind, or psyche, is itself split up, and the parts become egos, each in its turn presiding over the organism. Other conditions similar to the states which occur in split, or multiple, personality are not unfamiliar to us. The dissociation of sleepwalking, or somnambulism, is a transient and simple example of this same psychic mechanism. A split-off personality state occurs also, in more complicated form, in certain cases of chronic alcoholism, as in the so-called alcoholic ambulatory automatisms where the patient may find himself living and working in a distant city with no memory of how he got there. A similar splitting off of the personality occurs as a psychic manifestation in epilepsy, during which acts of violence are at times committed.

We come now to the consideration of true "multiple personality." In 1905 Dr. Morton Prince published his celebrated book entitled *The Dissociation of a Personality*. It was an exhaustive study of the mental states of a young woman whom he calls Miss Beauchamp. This young woman presented, with marked clearness, the psychopathic phenomena known as multiple personality.

She exhibited four distinct, well-defined character entities, or personalities. All of these might appear in the short course of one day, alternating with one another, coming and going much after the fashion of characters in a play. Again, one or the other of the dominant personalities would occupy the stage for long periods of time—weeks, or months, and even longer. This change of character, a kind of multiplied Dr. Jekyll and Mr. Hyde existence, with its face-about in habits and intellectual and social aims, made life a puzzling affair for Miss Beauchamp.

She was a young college woman of noticeable ability and culture. When she first came under Dr. Prince's observation he encountered a woman of great dignity and reserve, somewhat timid, but known among her friends as a girl of exceptional integrity. It was soon discovered, however, that by some extraordinary transformation, there appeared in the form of this individual a person of entirely different behavior and character. In the rôle of the second personality Miss Beauchamp would appear at the office not as the modest, dignified young woman the doctor had first met, but as a bold impish hoyden. Instead of honesty and consideration for others, she would exhibit trickery and selfishness. In short, he found himself at times facing a patient exactly the opposite in intellect, feeling, and behavior from the scholarly Miss Beauchamp. He presently discovered that even a third and a fourth personality might hold the stage in the character of the patient. The various personalities seemed to come and go for the most part without rhyme or reason; each carrying on its own activities, intent upon its own ambitions and pleasures, independent of, and regardless of, the welfare of the primary Miss Beauchamp.

In certain instances a personality was antagonistic to the true Miss Beauchamp. For ex-

*Presented, with motion pictures of a case of multiple personality, before the General Meeting of the Medical Society of the State of Pennsylvania, Philadelphia Session, October 14, 1926.

ample, the most fully elaborated second personality known as Sally (the impish, mischievous character) delighted in making things difficult for Miss Beauchamp. Miss Beauchamp was afraid of spiders. Sally, when in the foreground, put a box of spiders on the writing desk so that when the girl came into the Miss Beauchamp consciousness she would be terrified. Again, the modest Miss Beauchamp would come to herself in undignified positions assumed while the Sally personality was in ascendency.

These clear-cut contrasts of behavior represent opposing groupings of ideas and feelings in the psychic life. As has been said, each grouping, as it is dominant, carries with it the ego identity of the individual.

So much for Dr. Prince's case of Miss Beauchamp. My own case, which I am presenting under the name of Mrs. X., parallels strikingly that of Miss Beauchamp. The great difference in the two individuals is that while Miss Beauchamp was a young woman of position and education, my patient, Mrs. X., is a girl of humble origin and environment, and few educational advantages. Both girls, as children, were manifestly neurotic; in each there is a history of "fainting" spells in childhood; of sleepwalking, or somnambulistic episodes; of attempts to "run away." Neither was able to pursue a given task for any length of time. Both were day-dreamers; both came into sharp conflict with one or the other parent. To sum up, there were numerous stigmata of hysteria in each, and allowing for the difference in social opportunity, a remarkable parallelism in career, and in the number and types of personality states developed in each.

I first saw Mrs. X. in the spring of 1923. She was 21 years of age. She presented a history of nervousness in childhood. She was born at seven months. She cried excessively for the first year. She was always restless, and liked to "run away." She began having fainting spells at nine. In the first "spell" the girl was found limp, unconscious, and cyanotic. These early "spells" lasted but a short time; sometimes in them she would laugh and cry, and she would, as related by her mother, "shake all over in coming out of them," would seem confused, and retain no memory of the episodes. At that time the attacks occurred at intervals of several weeks; occasionally months apart. At times she would say her arm hurt, again she would have a stiff leg. At one time she was unable to walk for two months. She would say that she had no feeling in her legs. It is easy to see that she was presenting definite hysterical symptoms.

As a child she did not get along with other children. She was constantly fighting with the children in the neighborhood. She was always in hot water with her father, never helped about the house, and when pressure was exerted to make her help a "fainting spell" often resulted. Her father often punished her severely for not helping her mother; he thought she was "just putting on"! She early showed a tendency to confabulation and exaggeration. She never seemed to know about bad things she had done. The girl complained that everybody lied about her. (This indicated early amnesic dissociations. Not knowing things she had done, she thought the reports were lies.)

Later the girl developed a passion for the movies, would get excited over them, and could relate the scenes in detail. She read many light novels, would read in bed all through the night. She would get excited over the love stories, and tell them over and over. She was constantly romancing. (This emotional response is interesting in view of the fact that later as her split-off personality states developed she would emerge as different imaginary characters. Evidently she identified herself with various characters she had encountered in the movies and in fiction. For instance, at one time she became "Lucile," a Chicago cabaret girl who could toe-dance. Again she emerged in a split-off state as "a society girl," relating, while in this personality, that a wealthy man whom she had refused to marry had kidnaped her, and put her in a house of prostitution. Again she was a "New York woman" who was married, but had a secret lover. In her early romancing over stories and movies she was laying the foundation for her later identification, in split-off states, with her fictional heroines.)

She went to work at fourteen but could never hold a job for long. When she was older the parents opposed her going about with the man she afterward married. One day, after a violent quarrel with her parents about this fellow, she fell unconscious, and remained so, limp, eyes closed, for forty-eight hours (trance). (It will be recalled that earlier in life she had undergone similar spells of shorter duration, usually when opposed in what she wanted to do.) The doctor who saw her said she was all right, pulse fine, that she was just hysterical. When she came out of the attack she knew nothing of it. During the spell at times she sang, called her lover, said "George, mother likes you," then "Mother loves you." The family hit her, pinched her, threw water on her, without any effect. (This attack represents a dreamlike dissociation in which she was realizing her wishes that her parents would accept her lover.)

The father was stern with the girl in regard to George, and the spells continued, at frequent intervals. Finally she married the man.

Her marriage has been a stormy affair. It was during the earlier part of her married life that her mental dissociations elaborated themselves into a definite second personality, taking form in the mischievous character-entity which I have called "Susie." Her husband related that astonishing changes in her behavior took place after her first baby came. At times he would come home to find her domestic, interested in her house, taking all a normal mother's fond care of her child. Again he would return to find the baby neglected, apparently forgotten; the mother would be out aimlessly parading the streets, gazing into shop windows, and carrying on with strange men. The husband would upbraid her and take her home, where, often she would suddenly change from this frivolous wanton, into a serious, conscientious mother type. She would vehemently deny her escapade, or even any absence from home. Once he confronted her with a man with whom he had found her flirting, and she still angrily denied any knowledge of having seen the fellow.

The husband believed she was lying, and finally resorted to beating her as a "cure" for her unwifely escapades. This procedure served but to augment the personality dissociations, making it the more urgent for her to get away from the obligations of marriage. It was here in these prankish escapades from the humdrum of domestic life, that the flirtatious "Susie" personality had its origin. The development of this split-off mental state in which she unconsciously carried out her desires for freedom from the ties and obligations of married life, was but a continuation and deepening of her early attempts at flight from the duties of her parents' home, manifested in the "spells" and sleepwalking of her childhood and girlhood. We can see how completely Mrs. X. has been able to free herself from her duties and moral standards by her unconscious assumption of the childish, carefree, irresponsible "Susie" character.

As normally constituted, Mrs. X. is a neurasthenic hysterical individual, complaining of headaches and pains innumerable; in the "Susie" state, even somatic or bodily conditions are the opposite. "Susie" has never an ache or a pain. She is practically anesthetic to pinprick, though the normal Mrs. X. is extremely sensitive to it.

The extent to which Mrs. X. can carry her hysterical flight from suffering was exemplified at the birth of her second child. When labor approached she slipped over into the "Susie" personality, and "Susie" was immune from pain. This transformation to the "Susie" character was for her a typical and to-be-expected mode of adjustment to the painful situation.

As a child she had escaped difficulties by "spells"—her infantile flight from reality. From the pains of childbirth she found her hysterical refuge in flight to the "Susie" personality.

Relations between the husband and wife finally became strained almost to the breaking point. The baby had died of neglect, while the "Susie" personality, the flirting, devil-may-care, side of the young woman's make-up, paraded the streets. At this time a neighboring family befriended the couple and took them into their home. The reason for the interest of the new friends was a fanatical superstitious belief that in these "spells" the girl was possessed by devils, and that it was their mission to cast out these evil spirits.

In her fainting spells the man of the befriending family resorted to incantations and gestures to drive out the devils. (It is remarkable how completely these people had tabulated the characteristics of the various personalities, how accurately they could foretell the precise conduct which each personality would manifest, the means they had worked out for suggesting the "coming-up" of one character or another.) It is probable that the personalities were kept, and to some extent, at least, differentiated through the interest and entertainment the different good and "bad devils" furnished to this family.

It must be understood that the patient was not constantly displaying these acute phases of her personality changes. Much of the time while under my observation, she went along as the care-free "Susie."

Motion pictures were made showing the various phases of this personality, and it is possible to give to a reader only a vague impression of what the pictures convey. They are captioned as follows:

SCREEN PRESENTATION

"Characters," or Dissociation States, Appearing in a Case of Multiple Personality:

Susie, the most fully developed secondary personality.

Jack, a male member of the multiple-personality group.

Mrs. X., (apparently) the primary, or original, personality.

"The Baby," Mrs. X. in regression to the mental age of one year.

Trancelike and Transitional States.

Pictures taken at a family picnic. The childish, irresponsible Susie, the most fully developed secondary personality, appears first. In the picture, this is the split-off state into which Mrs. X. most frequently and readily passes. Susie is moderately anesthetic to pin prick.

Mrs. X. had a timid childish fear of having her picture taken. As Susie, she delighted in posing before

a camera. It therefore seemed expedient to get the pictures when the Susie personality was dominant. A picnic where she went while in the Susie state gave opportunity for the cinema. In none of the secondary-personality states would the patient talk, and "Susie" is seen in the picture writing answers to questions. In all the secondary states the patient was anesthetic, in varying degrees, to pin prick. This anesthesia is demonstrated at intervals throughout the picture.)

Caption 1. It was suggested that Jack, a male member of the multiple-personality group "come up," or appear. Susie is seen in the swoon or trancelike state by which she passes from one personality to another. She is completely anesthetic in these trance states.

(This profound anesthesia is evidenced by entire lack of response to pin prick. These trancelike states represent a much deeper departure from conscious awareness than the secondary-personality states.)

Caption 2. The patient had objected to Jack's appearance. She had said: "Jack is not comfortable in a woman's clothes"; hence, the transition does not occur readily, and she emerges momentarily still as Susie.

Caption 3. There is a brief transitional struggle, a swoon, and Jack finally appears. Note the male posture and hand grasp. Jack's masculine protest against feminine encumbrances—removes earrings and shoes, tugs at corset, pushes back hair. More anesthetic than the Susie personality—a strong jab with pin is not felt.

(The imitation of masculine posture and expression was striking in the Jack personality. The assumption of the male character in the picture indicates the facility with which such hysterical individuals can identify themselves with, or become, a character about whom their ideas or wishes may group themselves. In this paper it is not the purpose to go deeply into psychological explanations for this or that character transformation.)

Caption 4. Transition from Jack. Mrs. X., the primary personality, "comes up." Having left home and arrived at the picnic as the Susie personality, Mrs. X. is amazed at finding herself in the strange surroundings. She cannot understand where she got the bleeding, painful pin pricks, and remarks, "I'm all pinches!" The primary personality is hypersensitive to pin prick, and is the only personality who talks.

(The picture shows her in this primary personality jumping back at the slightest touch of the pin, in marked contrast to her reaction in any of the dissociated states. The pin prick was always applied without the patient knowing it was to take place.)

Caption 5. The following pictures were taken in the patient's home at a later period.

From the trance or dissociation state of twenty-four hours' duration, caused by shock from death of a friend, Mrs. X. emerges as "The Baby," at a mental age of about one year. She plays with a ball, looks at the electric lights, clapping her hands in glee, crying "ball! ball!" It is only the primary personality who talks; "the Baby" is, therefore, Mrs. X. in infancy.

(It will be recalled that Mrs. X. is the only personality who talks. The secondary personalities all communicate by writing. "The Baby" does not represent a change in identity to a second personality, but a regression to the patient's own personality at an earlier age, with all subsequent memory and knowledge in abeyance.)

Caption 6. She discovers that candy given to her is good. Babylike she puts other things into her mouth.

(In this regression the patient had to acquire experience as any child would acquire it. She had to learn things over again—like the use of a spoon, and how to put on her clothes. The remaining pictures show her in the various activities of a young child.)

Caption 7. "The Baby" plays with a doll.

Caption 8. Teaching her to walk. She watches the feet, imitating her elders.

Caption 9. Interested in Daddy's unshaven face.

Caption 10. Scolded, she begins to cry.

Caption 11. She discovers the camera man; imitates him as he turns the reel.

If one were put to the necessity of choosing any of the various psychopathic modes of flight from conflict, it seems to me that the dissociation route, taken by the so-called multiple-personality individual, has much to commend it. In this particular mode of escape, we usually see a complete and uncompromising shift to the instinctive levels of reaction; there is a wholesale acceptance of that line of conduct which is compatible with native, archaic wishes, and a complete shutting out of all adaptive paths that savor of pain or oppose the realization of the organism's wish. If we may conceive of a psychopathic mode of adaptation as being logical and consistent with itself, I think multiple personality has evolved it. This condition enables the personality equation, or sense of identity, to assemble itself about just that particular constellation of feelings, memories, and ideas which represents what the individual wants when he wants it. When we compare such facility of adjustment with the crippling substitutions usually seen in hysteria, the violent adaptations of epilepsy, and the grotesque and burdensome plight of the catatonic, the advantages of such a complete release from conflict as that generally seen in the dissociations of multiple personality are apparent.

Such cases seem to me to afford an example of a superficial schizophrenic cleavage. The peculiar ease with which the subject of multiple personality may function under shifting and independent centers of a personality domination, is not confined to the more mature symbolic levels of adult age, but it is capable of an easy backward, or regressive shift even to earliest childhood. An instance of the identification of an individual with her ego equipment at the earlier psychic level of one year of age has been demonstrated in the picture. This patient, of course, before she arrived at the age where her mental equipment was sufficient for the possible development of a split-off state which could function as a personality, had indicated her development in this direction by the hysterical dissociations which were so conspicuous in her childhood and youth. The nature of her spells through life present a gradation of involvement from the simpler vegetative and sensorimotor levels to the inclusion of the more intricate machinery constituting the personality at the symbolic level of

adult age. The close relationship or interdependence of the dissociations at these various levels is still strikingly evident in the occurrence of typical hysterical convulsive seizures replacing the personality derailments as circumstances happen to be provocative of such a type of reaction.

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THE NATURE OF HYSTERIA

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A patient who was recently undergoing an analytic investigation of the symptoms of his neuroses related how as a child he was much preoccupied with compulsive thinking as to how the various parts of his physical makeup were held together.

Later in life as he was passing through the period of puberty, this type of thinking became more persistent and began to be elaborated and projected into extrapersonal things, such as bridges, buildings, and other structures, in relation to which he suffered with feelings of fear and anxiety lest they should somehow fall to pieces and thus bring about his destruction.

His feelings of anxiety as to the physical integrity of material things induced him finally to take up a rather intensive study of physics and the laws pertaining to cohesion, molecular attraction, etc.—all for the purpose of finding some satisfactory answer to his anxious inquiry.

In middle life, as a result of a combination of circumstances, his neuroses broke out anew; this time with feelings of intense fear and anxiety about himself, for he now experienced such sensations as made him feel quite sure that his mind, his personality, his self, as he expressed it, was about to "fall to pieces."

This brief report of the case is given here in connection with the case of psychic dissociation reported by Dr. Wholey as an illustration showing how a tendency to psychic or personality dissociation may be felt on the part of the patient as subjective symptoms, with little or no objective conduct disorder, and yet be based upon the same psychologic principles as induced the more marked evidence of dissociation.

Scientific psychologic research into psychopathologic conditions such as these has in more recent times been carried on in certain quarters quite intensively, resulting in such findings as would indicate more and more clearly that the dynamic emotional forces constituting the personality are at best rather loosely bound together and only in a relative sense may they be considered to run smoothly during the developmental period into a well-unified emotional stream.

Observation and experience has demonstrated, furthermore, that under certain conditions all individuals may show at least a potential tendency to dissociation, a splitting up, or a falling to pieces, as it were, of the emotional background upon which the personality is based. This is so because there is inherent to the organism itself certain emotionally toned components which represent strivings, cravings, and impulses intrinsically bound up with the basic or primitive instincts, such as is characterstic of all living things and is manifested in the human organism, as in animals, in those functions which have to do with race and self-preservation.

These wishes, desires, and cravings in the human infant, as in the animal, are given relatively free range and tend to dominate conduct in such a manner as to give the most direct and unreserved gratification to the individual's instinctive strivings. But in the process of growth and psychologic development there is encountered increasing conflict on the part of the child as it begins to feel the pressure of social prohibitions and with it the necessity for modifying or conditioning its conduct in reference to its former self in such a way as to meet the demands of the more adult social environment.

The forces entering into this latter conditioning process go to make up the ego, which is the social or ideal self, and represent those conscious functions which enable the individual to adjust himself properly to law, custom, and convention, but which, in turn, remain always more or less in conflict with the wishes, cravings, and desires characteristic of the more primitive, instinctive, or infantile self. It is the abnormal activation of this basic, universal, conflicting emotional pattern, inherent to humanity itself which, in the presence of sufficiently exciting factors, makes for neurotic manifestations.

The organism or personality, therefore, that succeeds in maintaining itself in a state of dynamic equilibrium in the midst of the constantly shifting, diverging, and opposing emotional trends, is one whose condition is synonymous with emotional health and stability.

In those cases, on the other hand, where the relative interplay of the above-mentioned forces is such as to produce what may be termed a condition of unstable equilibrium, there are manifested symptoms of emotional and nervous instability and conduct disorders, the most common of which is the symptom-complex known as hysteria. The great array of symptoms encountered in this so-called functional nervous disease has always made of it a troublesome and outstanding enigma to medical science.

The works of Charcot represent the first

serious attempt in the making of a careful description of the phenomena of hysteria. Following this the works of Janet, of Paris, attracted much attention, as he was the first to recognize and propound the theory of psychic dissociation as a basic factor in this disease. He was also among the first to maintain that the symptoms of hysteria were purely mental in character. His theories were accepted by students of psychopathology in this country, and further elaborated, especially by such workers as Drs. Sidis, Morton Prince, and White. Their demonstrations of psychic dissociation as a characteristic of hysteria represented what seemed to be a marked gain in understanding as to what was really going on within the mind of the hysterical personality.

But it remained finally for Freud and the psycho-analytic school to go far beyond the point of merely observing and cataloging symptoms, and recognizing the factor of dissociation, into a new and larger field of interpretation. This school endeavored to show not only that psychic dissociation takes place, but that it does so because of very definite reasons; viz., the conflict produced within the personality as a result of emotional strivings, cravings, or impulses bound up with the primitive instinct, on the one hand, and the psychic forces maintaining the integrity of the ego, the more conscious ideal, or social self, on the other.

To overcome the conflict, the forces of the ego attempt to dispose of the objectionable intrusions resulting from instinctive cravings, and do so by an active mental process known as repression. This is an automatic and largely involuntary psychic function which tends to put out of the mind certain unacceptable feelings and desires—to dissociate them, as it were, from the field of conscious awareness. And so it is that repression comes to be the fundamental factor in the production of psychic dissociation, as well as the basic etiologic factor in those tendencies to dissociation which are characteristic of hysteria.

Repression of such things as are out of harmony with the individual's ethical-esthetic standards is a universal psychic function. The objectionable material is pushed out of the field of conscious awareness, but is not thereby pushed out of mind. It is, more strictly speaking, a process by which things are pushed into mind by means of the repressive forces, and in this way go to make up the content of those deeper mental regions which are spoken of in a descriptive sense as "the unconscious."

The content of the unconscious, therefore, being made up as it is largely of repressed instinctive cravings, strivings, or wishes, primitive in character, is about the same in all individuals, whether normal or abnormal. In the hysterical individual, however, there takes place a failure on the part of the repressive forces fully to dominate the unconscious, thereby permitting a part of the repressed content to come filtering through on to higher conscious levels, and in that way producing feelings of conflict which become registered in symptom formation.

The symptoms, that is, the observable hysterical phenomena, are found to be symbolic in character, and their analysis goes to show that they represent a compromise formation between the impulses, cravings, and desires of the more primitive unconscious and the repressive influence exerted upon them by the forces of the ego or the higher conscious self. In other words, the symptoms characteristic of hysteria represent the modifications or conditioning of unconscious material into such forms of expression as would maintain a sense of harmony with the ego and its social ideals.

In those cases, on the contrary, where the defense or repressive forces give way *en masse*, there is no chance for compromise formation as is the case in hysteria, for here the unconscious gains full control and dominates the entire personality. Such is the picture presented in marked psychic cleavage such as cases of double personality, or in the more malignant types of mental regression, as in dementia præcox.

But as indicated before, so long as the ego retains a relative degree of emotional integrity, the repressed emotional stimuli from the unconscious can gain entrance to higher conscious levels only by means of conversion into such form of expression as would be acceptable to the ego. In hysteria this is accomplished by the repressive forces displacing or sidetracking the objectionable impulses or stimuli away from the field of conscious awareness into peripheral somatic or bodily areas or into one or more of the various visceral enervations. Thus the well-recognized hysterical symptoms develop, involving, for example, the circulatory system, with tachycardia, extrasystole, tachypnea, etc.; or the repressive forces may act upon the unconscious stimuli by draining them off into other enervation spheres, such as the digestive tract, producing hysterical diarrhea, nausea, or vomiting; or the stimuli may enervate the more definite physiologic substratum of the emotions, viz., the endocrine system, producing heightened states of excitement, or inhibition and paralysis—all of which is beyond the control of consciousness.

This, in a general way, seems to be the mechanism in transference hysteria.

There are other types of cases in which the transference fails to take place and the stimuli

become dammed up, as it were, within the psyche, or mind itself, thus producing feelings of emotional tension, marked anxiety, or mental confusion. These latter symptoms, seemingly more mental in character, are productive of much suffering on the part of the patient. They often express a preference or wish for some bodily disease, even though it be serious, rather than suffer the mental torment. It is this wish that is being unconsciously gratified in transference hysteria. Again, in those cases where there is an especially tense and mad activity of repressed emotional forces, there takes place the corresponding exciting state manifested in passionate outbursts characteristic of the well-known "grande hysteria" of Charcot.

The marked facility with which the hysterical personality transfers and displaces his painful emotional and mental problems into somatic or bodily symptoms is a mechanism worthy of careful study and attention in all fields of medical activity. With these individuals one must be especially guarded as to the interpretation of their somatic or bodily symptoms.

In these times when science has so perfected the means of disclosing pathologic findings, biochemical changes, and foci of infection, there has gone along with it possibly a tendency to overestimate such findings in relation to the hysterical symptoms. In no sense, however, should such findings be disregarded; on the contrary, they should receive careful attention and be corrected as a means of eliminating all possible dynamic blocks within the organism, wherever they may be found. But, unduly emphasizing to the patient their importance, in relation to the hysterical symptoms, is often only a means of aiding, abetting, or fixating an hysterical transference into a somatic or bodily channel.

It was the recognition of this tendency, as observed in the patient, that has long since caused surgeons to discontinue much of the operative procedure upon female sexual organs as a means of curing hysteria. It is now known that in many of these cases one is dealing with a psychosexual problem which by means of repression is transferred to the physical counterpart, viz., the sex organs. These are problems of psychopathology rather than physical pathology and should be approached from the standpoint of a scientific psychotherapy in keeping with the nature of hysteria.

ABSTRACT OF DISCUSSION
Of Papers by Drs. Wholey and Smeltz

MAX WEINBERG, M.D. (Pittsburgh, Pa.): I want to cite a case of my own—a young woman, married, but whose marital state was not to her liking, and who regressed sometimes to the infantile state, even to the stage when she was just being born. In that condition she would hold the embryonic position, and while in that position would say: "I hope they will let me alone. Why don't they let me lie with my head down? I get so dizzy." I asked her later if she knew anything about the theory that the newborn infant should be kept for a time with its head down, and she said she did not.

Dr. Smeltz mentioned the conversion theory that the individual as the result of conflict cannot put his hand on the table, etc. Two years ago a young man, a high-school student, was brought to the hospital with a history of paralysis of his left arm and neck muscles. On going into the make-up of the man, he was asked about day dreams. He said: "Yes I have them quite often." His ambition was to be a great football player. A few days before, while he was in a mathematics class, he visualized himself as the captain of a great football team. His team made a rush, and he was at the bottom of the heap, and after the play his left arm was paralyzed. He does not like school work, and this carries out the conversion theory. In fifteen minutes he could move the arm.

We must understand the psychic mechanisms of these patients just as we do the physical disabilities. Just as the orthopedic surgeon must understand the mechanical splint, so must we know how to apply a psychic splint.

The Relation of Bacteriology to Clinical Medicine*

THE SIGNIFICANCE OF REGIONAL BACTERIOLOGIC FLORA

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In the past fifty years, but more particularly in the last decade, a colossal amount of research has been done to ascertain the types of microörganisms encountered in various regions of the human body. While some of this work as yet maintains an academic status, the greater portion of it has led the way to a clearer understanding of the mechanism of bacterial invasion, and has shed a not inconsiderable ray of light on many of the problems of medicine and surgery. It is obviously impossible, in a presentation of this character, to deal with all the bacteria encountered in all parts of the body. Moreover, it would seem to be more apropos of this occasion to mention some of the bacteria encountered in a few selected anatomic regions, and to indicate their practical application to clinical medicine.

It has long been known that staphylococci and diphtheroid bacilli are virtually ubiquitous on healthy epidermal surfaces, just as Schachter[1] and others have demonstrated that the presence of hemolytic streptococci on the integument is uncommon. Between these two extremes many bacterial and higher forms have been found on cutaneous surfaces.

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For several years we have been interested in the regional bacteriologic flora of the human skin —not because so little was known about it, but because the clinician (or even the bacteriologist) has been prone either to disregard or underestimate the likelihood of a given infection being caused by bacteria which were present in the skin at the inception of the infection.

Our attention was directed to these channels by the occurrence, within a few weeks, of two fatal cases of gas gangrene following the hypodermic injection of drugs into the thigh. As cultures of the drugs were sterile, and as it was suggested that the organisms might have been carried into the subcutaneous tissues from the skin at the time of puncture, a study of the anaërobic flora of the buttocks and inner surfaces of the thighs of twenty unselected persons was undertaken. Much to our surprise, B. aërogenes capsulatus (B. Welchii) was isolated in at least one of the three cultures from each individual. With the knowledge that these germs do occur in the intestinal canal, it seemed fair to assume that their presence on the thighs and buttocks was the result of fecal contamination. We are aware that hundreds of injections are given into the buttocks and thighs every day, and that very few infections result. But, inasmuch as we know that the potentialities for infection are present, surely it is justifiable to warn those who elect these sites for inoculation, so that every precaution to cleanse these parts adequately may be taken.

More recently, we have conducted an investigation to determine the predominating bacteria of the normal external auditory meatus. Of the forty-six ear canals which were cultured, all showed the presence of staphylococci, and many yielded diphtheroid bacilli. There is nothing unusual about this. In fact, we expected to find it so. But it did indicate to us that the all too common condition of furunculosis of the auditory meatus can be caused by bacteria which are lurking in the superficial cutaneous strata, and do not necessarily have to be introduced into the canal from an extraneous source. There is another lesson to be learned from this simple study. Valentine[2] has shown that, in acute suppurative otitis media, the causative organisms are almost invariably hemolytic streptococci or pneumococci, which are serologically identical with strains recovered from the nasopharynges of the same patients, and that in the subacute and chronic types of purulent middle-ear disease, the primary invaders are supplanted most commonly by staphylococci and diphtheroid bacilli. Is it not probable, then, that these secondary bacteria enter the tympanic cavity from the external meatus by way of the perforation in the ear drum? If this be true, and we believe it is, think of the incalculable amount of damage which can be done by the promiscuous aural irrigation of acutely discharging ears!

Realizing the importance of determining the normal, average, or mean distribution of the causal organisms in the upper respiratory passages during nonepidemic periods, many investigators have given us a stupendous amount of data relative to the occurrence of microbic forms in the nasopharynges and oropharynges of human beings. The exhaustive studies of Davis, Pilot, and Pearlman,[3] Longcope and Fox,[4] Park and Williams,[5] Dochez and Avery,[6] Stillman,[7] Babcock,[8] Maclay,[9] Crowe and Thacker,[10] Nichols,[11] Otteraaen,[12] Cecil and Steffen,[13] Gordon,[14] Branham and Hall,[15] Bloomfield and Felty,[16] Hudson,[17] Julianelle,[18] Felty and Heatley,[19] Zingher,[20] and many others have furnished a wealth of statistical facts from which many epidemiologic and etiologic truths concerning respiratory diseases have been evolved. Time does not admit of cataloging the incidence of the various bacteria which have been encountered in these analyses, but certain observations have been made which merit attention. For instance, it is important to know that during epidemics of cerebrospinal meningitis, the proportion of meningococcic carriers in the affected community may increase from 2 per cent under average conditions to 80 per cent among contacts, and that similar conditions can prevail with B. diphtheriæ, pneumococci, and streptococci. While one should realize that hemolytic streptococci have been isolated from the crypts of extirpated tonsils and adenoids in as high as 97 per cent of cases, it is also of the greatest practical value to know that the incidence of hemolytic streptococci on nasopharyngeal surfaces decreases after tonsillectomy, and has been known to drop from 60 per cent before the operation to 5 per cent afterwards (Tongs[21]).

It is often difficult to prove experimentally that an organism which is more or less constantly associated with a given disease is the cause of that disease. This was nicely illustrated in the experiments[22] which were conducted several years ago by the U. S. Public Health Service and the U. S. Navy on over 150 human volunteers. The opportunities in this research seemed unlimited, but in only four instances was a reaction simulating influenza obtained, although the many experiments included the introduction of various bacteria, and filtered and unfiltered nasopharyngeal washings from early uncomplicated cases of influenza into the upper respiratory passages of the volunteers. In the same investigation,[23] we were able to prove, however, that acute

tonsillitis can be caused by hemolytic streptococci, inasmuch as sixteen of the volunteers who received crude nasopharyngeal washings contracted acute streptococcic tonsillitis. In addition, the extensive investigations of Bloomfield and Felty[16] on acute tonsillitis have given us important facts regarding the epidemiologic features of this disease. They found that these bacteria under average conditions were strictly adapted to a local growth in foci of lymphadenoid tissue in the upper air passages, especially the tonsil; that acute tonsillitis is not usually an autogenous infection, but occurs in persons not already carriers of hemolytic streptococci; that intensive overcrowding was necessary to bring about transfers of virus to a degree adequate to produce the disease; and that aërial (droplet) infection played no part in the transmission of acute tonsillitis, but that expectorated hawkings seemed the most probable vehicle by means of which the streptococci are discharged and that transmission must be by direct contact with the patient or carrier or with freshly contaminated objects.

The various anatomic components of the gastro-intestinal tract have been subjected to exhaustive bacteriologic surveys by many workers, with the result that it is common knowledge that the healthy stomach and duodenum are relatively free from bacteria, and that the lower intestinal canal abounds with bacillary, coccoid, and spirochetal forms. While it cannot be disputed that variations in the intestinal flora often are responsible for certain types of enteric disease, we elect here to dwell on the bacterial content of only two regions of the gastro-intestinal canal, namely, the gall bladder and the appendix.

On a previous occasion we[24] discussed the results of 408 routine cultures from human gall-bladder bile. Half of these cultures yielded a growth. The types of organisms fell within well-known groups, of which B. coli was the most frequent (27 per cent). The members of the B. mucosus capsulatus group accounted for over 11 per cent, exceeding in incidence B. typhosus (9 per cent). Nonhemolytic streptococci occurred twice as frequently as hemolytic streptococci (5.6 per cent). From the types of bacteria isolated, their relative incidence, and usual habitat, we felt that these results on human material compared favorably with the experimental findings of Meyer and his collaborators,[25] and that they strengthened the chain of evidence that the two most important portals of entry for bacteria to the gall bladder are the hematohepatogenous, or descending, and the hematogenous routes, of which the former is the more important.

The character of the microbic flora of the vermiform appendix is no secret. In a bacteriologic study of normal and diseased appendices, Kraft[26] found that nonhemolytic streptococci and colon bacilli occurred much more frequently than hemolytic streptococci. Quite recently, Warren,[27] by combining bacteriologic and histologic studies in sixty-six cases of acute appendicitis, was also able to show that B. coli was the predominant invader. By virtue of these bacteriologic findings and the fact that all early lesions were noted at the margin of the appendiceal lumen, he concluded that the evidence was against a hematogenous origin of acute appendicitis, a view also held by several experimentalists.

It has been demonstrated by Permar,[28] Pilot,[3] and others that the lower genito-urinary tracts of male and female harbor many different kinds of bacteria, especially staphylococci, streptococci, and diphtheroid, colon, mucosus capsulatus, and fusiform bacilli, as well as spirochetes. The famed and rather poorly understood bacillus of Döderlein has been shown by Lash and Kaplan[29] to represent a large group of organisms. The knowledge that these bacteria do occur in the lower genito-urinary tract cannot but lend credence to the idea that under certain circumstances they can cause ascending infections of the upper realms of this system. Another practical application, which we have proved by blood cultures in more than one instance, is that the ordinary case of "urethral chill," as seen usually after manipulation of the male urethra, is in reality a manifestation of a bacteriemia wherein diphtheroids or B. mucosus capsulatus group members play the leading rôle. We wish to emphasize the importance of this group of organisms (B. mucosus capsulatus) in inflammatory processes of the respiratory, cholecystic, and urinary tracts.

In conclusion, therefore, it is quite evident that additional studies on the regional bacteriologic flora of the human body offer great possibilities relative to clarifying many of the problems of infection and infectious diseases.

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THE CLINICAL VALUE OF BLOOD CULTURES

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Blood cultures, as a diagnostic measure, have come into general use, and their value as such has steadily increased with improvements in technic and our knowledge of their interpretation in various diseases. We have had an opportunity to study a series of 3,086 consecutive cases by our routine method, and this series will form the basis for the observations which are to follow.

By our routine method we mean the collection with a Luer syringe of about 10 c.c. of blood from an arm vein and its immediate introduction into 100 c.c. of meat-infusion broth. This is incubated at 37.5° C. and is examined daily for a growth. If none is found on the second day, a blood agar slant is inoculated from it, and this repeated daily for at least five days before discarding the culture. If a growth is found, a blood agar plate is streaked, the organism isolated in pure culture, and identified by its reactions upon the various carbohydrate media. At least 10 c.c. of blood should be used, because there is a definite element of chance in obtaining the organisms, especially if they are present in small numbers. The cases upon which this work is based are consecutive ones, no attempt being made to choose any special type merely for statistical purposes. It includes 3,086 routine cultures, of which 691 showed a growth of pathogenic organisms, 170 contaminated, and 2,225 were sterile. When analyzed, this series will be grouped according to the various diseases rather than the bacteria found.

In cases on which a clinical diagnosis of typhoid fever was made we had a total of 331 cultures, of which 144 (44 per cent) were positive. Of these, 133 (91.6 per cent) were B. typhosus, 9 were B. paratyphosus B, 1 was B. alkaligenes, and 1 B. coli. In other words, in only 40 per cent of cases clinically diagnosed typhoid fever was B. typhosus recovered from the blood stream, while a few showed a blood-stream infection by organisms which gave a similar clinical picture. Of the large number of cases in which negative cultures were obtained, by far the majority proved later not to be typhoid fever or to have been taken too late in the course of the disease. We know that in typhoid fever we have a bacteriemia, as a rule, for about the first ten days or two weeks of the disease, so that cultures taken later than this will be practically always negative. Conversely, some cases which clinically had been diagnosed other than typhoid fever were proved by blood cultures to be typhoid fever. These were: acute miliary tuberculosis 3, osteomyelitis 2, cerebrospinal meningitis 2, acute appendicitis 2, pneumonia 2, liver abscess 1, tonsillitis 1, and 1 was undiagnosed. Thus we can see the definite value of blood cultures in the early diagnosis of typhoid fever and diseases with which it might be confused. It has proved a large number of cases to be typhoid or paratyphoid fever when the clinical diagnosis was such, and in some instances has shown the infection to be of that nature when the clinical symptoms were so atypical as to lead to an erroneous diagnosis before the blood culture settled the matter. A blood culture will give the earliest positive diagnosis in this disease, the organisms being in the blood stream for some time before the Widal becomes positive, and it is not influenced by any vaccine prophylaxis, as the latter reaction might be.

Another condition in which blood cultures have proved of value is in the various types of endocarditis. In all, we had 190 cultures on cases which clinically were endocarditis, and of this number 48, or about 25 per cent, gave us the organism which was active at that time. Tabulating these, we found Streptococcus viridans 33 times, hemolytic streptococci 7, Staphylococcus aureus 2, Staphylococcus albus 2, pneumococcus 1, gonococcus 2, and the Bacillus mucosus capsulatus group 1. No growth was shown in 142 cultures, or about 75 per cent. Many of the sterile cultures were on cases of rheumatic origin, which by the routine methods one would expect to be negative. Those in which organisms were isolated had a definite prognostic value, since they gave an idea of the type of lesion present. The organism most frequently encountered was Streptococcus viridans, which we have learned to associate with subacute bacterial endocarditis, and its finding leads us to predict death as the probable ultimate termination. Likewise the other organisms encountered usually are associated with the malignant type of endocarditis and when found foretell a more acutely fatal course. Repeated negative cultures on a given case, while not

absolutely indicating a favorable prognosis, would lead us to expect one. Thus we see that positive cultures of any pathogenic organisms will be rather unfavorable from a prognostic standpoint, while repeated negative cultures tend toward a favorable prognosis.

Acute miliary tuberculosis is another condition which blood cultures are of definite aid in diagnosing. One would naturally expect a sterile culture in this disease, and when microörganisms are found we have good evidence that it is another type of infection. Of 32 cases in which this clinical diagnosis was made, our cultures were sterile in 24 instances. Of the others, the pneumococcus was found 3 times, B. typhosus 3 times, Streptococcus pyogenes once, and Staphylococcus aureus once. Thus in one fourth of the cases a reversed diagnosis was made.

Temperature elevations in the puerperal state may be due to septicemia or merely to the absorption of toxins. The latter will never give positive results by blood culture, while the former will in a large number of instances. From cases diagnosed as puerperal sepsis we obtained 256 cultures, 48 (18.7 per cent) of which showed a growth of pathogenic organisms. Hemolytic streptococci were found 30 times, while the nonhemolytic variety was present only once; Staphylococcus aureus was found 7 times, Staphylococcus albus once, pneumococcus once, B. mucosus capsulatus once, B. Coli communis 4 times, and B. alkaligenes 3 times. It is evident that these results are quite important in the prognosis and treatment of this group of cases.

It is interesting to note the constancy with which certain organisms are found in some diseases. This is well illustrated in acute osteomyelitis. On such cases we had blood cultures 69 times, and of these 37 (53.6 per cent) showed organisms to be present in the blood stream. That organism was Staphylococcus aureus in 32 cases and Staphylococcus albus in only 1. Hemolytic streptococci and typhoid bacilli were each found twice. We believe the infection of the bone marrow to be by way of the blood stream, and the frequency with which we obtain positive blood cultures in acute osteomyelitis substantiates this idea. The procedure is of definite diagnostic value, especially in children.

Blood cultures were obtained in 471 cases of pneumonia, including both the lobar and bronchial types. Of this number, 340 were sterile, while 131 (29.9 per cent) showed a growth of pathogenic organisms. Of these positive cultures, the most frequent organism found was naturally the pneumococcus, this being present 116 times (88.5 per cent). The pneumococci were typed in 84 of these, with this result: Type 1, 12 per cent; Type 2, 8 per cent; Type 3, 21 per cent; and Type 4, 58 per cent. Where the organisms from the sputum were also typed we found a discrepancy of 20 per cent; that is, in one fifth of the cases the type obtained from the sputum was presumably incorrect. Other organisms beside pneumococci were found in pure culture in some cases, mostly bronchial pneumonia, and were: hemolytic streptococci 3, nonhemolytic streptococci 3, Staphylococcus aureus 8, and B. typhosus 1. Early in pneumonia the blood culture is of value mostly in determining the nature of infection, since we believe that a blood-stream infection is present early in practically every case, and the organisms will be found if the culture is taken at the right time. Here it has no prognostic value, save that in relation to the type of organism. Later in pneumonia, however, a positive blood culture gives a serious outlook.

A localized abscess or cellulitis is often followed by a blood-stream infection, or it may be only a local manifestation of a general infection. We had cultures on 312 cases of abscess or cellulitis, and of these, 70 (22.4 per cent) proved to be accompanied by a general septicemia. Quite a variety of organisms were found: hemolytic streptococci 35, nonhemolytic streptococci 4, Staphylococcus aureus 24, Staphylococcus albus 6, and B. paratyphosus B 1. Local infections by streptococci are much more apt to be associated with blood-stream involvement, and this is borne out by finding this organism present in the majority of our positive cases. The hemolytic streptococcus is much commoner in such conditions than is the nonhemolytic variety. Any case of local abscess or cellulitis which has a febrile reaction out of proportion to the extent of the local infection should have a blood culture to determine whether or not it is accompanied by invasion of the blood stream.

Many requisitions come to the laboratory with a clinical diagnosis of septicemia, and no history which will give any clue to the actual cause. There were 77 such cases and 27, or 35 per cent, of these gave positive results. The organisms present in the majority of instances were hemolytic streptococci. These figures tend to show how the clinician in many instances can tell whether or not the blood stream is invaded, and cultures in these cases are mostly confirmatory.

On the other hand, many requests for cultures are made on cases which are running a mild febrile course and which the clinician has been unable to diagnose. Of such cases there was a total of 153, and in only 5 instances did the blood culture make the diagnosis. These were 2 cases of Staphylococcus pyemia, 1 of typhoid

fever, and 2 of hemolytic streptococcus septicemia. From this we can see that there is little hope of a blood culture making a diagnosis when clinical methods have furnished no clue, but this should not prevent one from using it if he thinks it might be of any value. Many more positive cultures would be obtained if the clinician were more thorough in his examination and would order them only on cases in which it might be of some value.

Positive cultures were obtained in quite a number of other conditions and by merely enumerating them, one can see their value. They were: pyelitis 8, phlebitis 12, cerebrospinal meningitis 11, erythema nodosum 1, gangrene of extremities 6, tonsillitis 3, pelvic cellulitis 3, mastoiditis 8, compound fractures 11, appendicitis 6, and cholecystitis 1. Many cases gave consistently negative results, and as a rule they were those in which a blood-stream infection would not be expected. These were: purpura hemorrhagica 16, catarrhal jaundice 2, aneurysm of aorta 1, acute nephritis 1, pernicious anemia 25, influenza 18, uremia 1, erysipelas 17, acute encephalitis 1, and malaria 1.

In the entire series the cultures were contaminated presumably in 170 instances. The most common contaminators were the usual skin and air organisms, especially the Staphylococcus albus, B. proteus vulgaris, and certain diphtheroid organisms. Some of these contaminations undoubtedly occurred at the time of taking the blood, but the greater majority developed on the fourth or fifth day, and had been introduced by the bacteriologist in the manipulation incident to routine examination. It is very important for the bacteriologist to be able to differentiate pathogenic from nonpathogenic organisms, and to consider this before deciding whether a growth is the infecting organism or merely a contamination. He should have at his disposal a brief clinical history of the case, and should consider this before making his diagnosis. In other words, the medical bacteriologist should think clinically as well as in his own field when carrying out routine bacteriologic examinations.

Summary

(1) Blood cultures are of definite value in clinical medicine, both from a diagnostic and prognostic standpoint.

(2) Their value varies considerably in different diseases, and the clinician must be able to determine this for his own use.

(3) As in so many other laboratory procedures, a positive culture means much; but negative cultures cannot be disregarded, because they may rule out certain diseases.

(4) Contaminations occur more frequently as a technical error during routine study of the culture than at the time of obtaining the blood.

(5) In many instances blood cultures are our only means of making a positive diagnosis.

(6) One negative culture may mean little, but repeated negative cultures have a definite value.

THE INCIDENCE OF PNEUMOCOCCUS TYPES IN PNEUMONIA IN PITTSBURGH

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This report is a summary of results in classifying pneumococci according to their biologic differences. It comprises material obtained from the records of the Singer Memorial Research Laboratory and the laboratories at the St. Francis Hospital, the Mercy Hospital, the Pittsburgh Hospital, and the St. Margaret Memorial Hospital, all of Pittsburgh. The data represent the results of the examination of sputum from persons presenting clinical manifestations of pneumonia. The technic used in the various laboratories was identical with that developed at the Rockefeller Institute and reported by Dochez and Gillespie, Cole, Avery, and others. For comparison, the biologic types of pneumococci isolated from various sources, including blood, meningitis, empyema, and mastoiditis also are given. No attempt has been made to discuss mortality in relation to the incidence of pneumococcus types, as the object of this communication is to emphasize the frequency with which pneumococcus Type IV has been and is encountered in pneumonia in western Pennsylvania —notwithstanding which it should be noted that pneumonia is a particularly fatal disease in that locality.

An early report from Pittsburgh would indicate that the incidence of the various groups of pneumococci occurs in a ratio similar to that in pneumonias elsewhere. In 1917 Hartman and Lacy reported a series of 99 cases, and found that the incidence of the various groups of pneumococci agreed quite closely with that found by Cole. The percentages in this series were: Type I 41.4 per cent (41 cases), Type II 29.3 per cent (29 cases), Type III 6 per cent (6 cases), Type IV 23.2 per cent (23 cases). This report is interesting in view of the subsequent experience of this laboratory, as the records for the last eight years show a total of 832 sputum examinations for pneumococcus types, the results of which are shown in Table I. These findings show a discrepancy in the incidence of the pneumococcus types over two periods, and yet the

TABLE I

PNEUMOCOCCUS TYPES FROM SPUTUM (CLINICAL PNEUMONIA)
From the Singer Memorial Research Laboratory

Type	1919	1920	1921	1922	1923	1924	1925	1926	Total	Per Cent
I	7	6	16	6	7	65	30	10	147	17.66
II	12	9	5	6	7	31	43	40	153	18.38
III	..	6	9	10	8	31	30	16	110	13.22
IV	13	34	62	38	21	96	111	47	422	50.72
Totals	32	55	92	60	43	223	214	113	832	.....
Per Cent Type IV ...	40.62	61.81	67.39	63.33	48.8	43.49	51.86	41.59	....	.....

procedure for determining these types has been uniform throughout. If one still further reviews the study of Hartman and Lacy, it is clear that the percentages of the pneumococcus types isolated from sources such as blood, pleural effusions, and meningitis approximated those obtained from the sputum examinations. Again, the records of this laboratory for the last three years show a preponderance of pneumococcus Type IV in materials such as blood, pleural exudates, spinal fluids, mastoid pus, and pus from lung abscesses, as shown in Table II.

The increase in the percentage of Type I in these materials over the sputum is found in the frequency of this strain of pneumococcus in the blood and mastoid pus, their number being 10 and 12 respectively; and yet when the incidence of Type IV pneumococcus is considered, the organism was found 10 times in the blood, 13 times in the mastoid pus, and 23 times in pleural exudate, which latter number is more than four times as frequently as the Type I organism was found in the same material, and more than three times as frequently as the Type II organism, which number was 7. It is interesting to note that Type IV was found as often in the blood as Type I, and more often than Type II and Type III. The incidence of the Type IV organism in the blood would indicate, although it is referred to as the waste-basket group, that it has invasive qualities equal to the so-called "fixed" strains of the pneumococcus.

TABLE II

PNEUMOCOCCUS TYPES ISOLATED FROM VARIOUS SOURCES
From the Singer Memorial Research Laboratory

Pneumoeoccus Types	I	II	III	IV	Totals
Mastoid	12	2	9	13	36
Empyema	5	7	2	23	37
Spinal Fluid .	2	4	..	1	7
Blood	10 (31.25%)	8	4	10 (31.25%)	32
Totals	29	21	15	47	112
Per Cent of Types	25.89	18.75	13.39	41.96	...

From the foregoing discussion it would appear that some change has occurred to have so decidedly influenced the incidence of pneumococcus types in the sputum of patients presenting clinical manifestations of pneumonia. This feature was commented upon as early as 1919 at an impromptu meeting of the laboratory workers of Pittsburgh in the Medical School of the University of Pittsburgh. The discussion concerned the frequency with which Type IV pneumococcus was being found in the sputum of pneumonia cases at the time. The previous year had seen the great pandemic of influenza, a scourge that so materially left its imprint on the trend of medicine in general and that developed such a diversified symbiotic bacteriologic flora. This disease, with its subsequent effects, may be accountable at least in part for the change in the incidence of the pneumococcus types.

One more readily may understand the foregoing if the pathologic picture of the pneumonia of pre-epidemic times is recalled and compared with the lung findings of the present time. In 1922 Cecil cited the disturbance in the incidence of rate of the pneumococcus types produced by the influenza epidemics, and concluded from a series of 200 cases of pneumococcus pneumonia typed at Bellevue Hospital that the incidence of the fixed types of pneumococcus pneumonia is the same now as it was before the epidemic of influenza occurred. Although the report of Cecil indicates that the incidence of the pneumococcus types in pneumococcus pneumonia had returned to the pre-epidemic ratio during the winter of 1921-22 in New York, it is evident from the records of the Singer Memorial Research Laboratory that a similar reversion to pre-epidemic ratio has not been experienced in Pittsburgh. On the contrary, the highest incidence of Type IV pneumococcus was found during the years from 1920 to 1923. Table I also shows a variation in the incidence of the several types from year to year, without, however, a material diminution in the percentages of Type IV during the last four years.

The results obtained in the analysis of the

TABLE III

Pneumococcus Types from Sputum (Clinical Pneumonia)
From the St. Francis Hospital Laboratory

Type	1918	1919	1920	1921	1922	1923	1924	1925	1926	Total	Per Cent
I	1	12	4	16	5	32	34	52	24	180	16.45
II	2	10	15	10	5	8	33	31	19	133	12.14
III	3	11	33	7	7	23	26	27	24	161	14.71
IV	4	69	104	71	19	97	72	102	82	620	56.83
Totals	10	102	156	104	36	160	165	212	149	1,094	.....
Per Cent Type IV	40	67.64	66.66	68.26	52.77	60.63	43.63	48.11	55.03	.....	.....

sputa shown in Table I are interesting in view of the reports of Marginesu and L. Corda, who found 30.45 per cent Type IV pneumococcus in 56 cases of lobar pneumonia. In 1924 Malone reported that Type I pneumococcus is a common causal agent of pneumonia in India, and that Types II and III are less frequently encountered in India than in Europe and America, while the majority of cases are due to strains of Type IV which were concerned in 47.2 per cent of 106 cases occurring among Indian troops. In a group of 60 cases of pneumonia in the Baluchistan, Malone found the incidence of Type IV pneumococcus to be 53.3 per cent.

It is our purpose to present evidence that pneumococcus Type IV is the etiologic factor in a major percentage of pneumococcus pneumonia in Pittsburgh, and further that pneumococcus Type IV is an organism possessing invasive qualities in a degree not generally accorded to this organism.

The results of 1,094 typings for pneumococcus in the sputum of patients presenting clinical manifestations of pneumonia done in the St. Francis Hospital laboratory of Pittsburgh are shown in Table III. The incidence of pneumococcus Type IV was equally high during the last three years at St. Margaret Memorial Hospital, where in a series of 101 typings for pneumococcus in cases of clinical pneumonia, this organism was found 60 times, or in 59.4 per cent of the cases. The ratio of Type IV pneumococcus for six years at the Pittsburgh Hospital was 46.42 per cent, or 91 of 196 examinations. In 302 examinations conducted in the laboratories of the Mercy Hospital in a period of 2½ years, pneumococcus Type IV was found 214 times—a percentage of 78.27. The results in a total of 2,524 sputum examinations for pneumococcus types done in the laboratories of the above-mentioned hospitals during the last eight or nine years are shown in Table IV.

A list (table V) of 234 positive pneumococcus blood cultures in the records of the St. Francis Hospital Laboratory over a period of 10 years show pneumococcus Type I, 38.03 per cent (89 cases); Type II, 11.53 per cent (27 cases); Type III, 14.95 per cent (35 cases); Type IV, 35.47 per cent (83 cases). Here again the Type IV pneumococcus is found to be equivalent to pneumococcus Type I as a blood-stream invader, and this finding is in accord with the experience of the Singer Memorial Research Laboratory. Although the "fixed" types are accountable for about 64.43 per cent of positive findings in this series (Tables II and V), the case of the comparative invasive quality of pneumococcus Type IV is not weakened when the figures are critically inspected. One may say that here again there is evidence that the fixed pneumococcus types are responsible for the majority of pneumococcus pneumonia. This deduction would naturally follow from what we know of the ability of the pneumococcus to invade the blood stream, accepting the figures as the true ratio incidence of type infection in pneumonia on a possible 100 per cent positive basis; and yet we find that the pneumococcus Type IV has invasive qualities almost comparable to pneumococcus Type I, and far greater than pneumococcus Types II and III.

This fact merits more serious consideration when it is remembered that the biology of the pneumococcus Type IV is little understood, and aside from the individual efforts to classify so-called Type IV pneumococcus, little advance has been made. This is also true of the so-called fixed Types II and III, which have resisted every endeavor to bring them to the status of

TABLE IV

Pneumococcus Types from Sputum
in 2,524 Examinations

Type	I	II	III	IV	Totals
Singer Laboratory	147	153	110	422	832
St. Francis	180	133	161	620	1,094
Mercy	22	33	33	214	302
Pittsburgh	28	46	31	91	196
St. Margaret	11	15	14	60	100
Totals	388	380	349	1,407	2,524
Per Cent	15.37	15.05	13.82	55.74	.....

TABLE V

POSITIVE PNEUMOCOCCUS BLOOD CULTURES
From St. Francis Hospital

Pneumococcus Types	I	II	III	IV	Totals
Blood	89	27	35	83	234
Per Cent	38.03	11.53	14.95	35.47	...
Other Sources as Indicated in the Text	16	13	42	57	128
Per Cent	12.5	10.15	32.81	44.53	...

pneumococcus Type I, for which latter organism there is a specific but not universally satisfactory therapeutic agent. I say this qualifiedly, and mean that although there are three distinct serologic types of pneumococcus, it would appear that some new attack must be made before we are able to fulfill our obligation to the pneumonia patient. Here one is reminded of the work of Lister, Nicolle, and others. The importance of pneumococcus Type IV in the morbidity and mortality of pneumonia must be emphasized, and regardless of the type of pneumococcus the clinical picture in lobar pneumonia must depend to some extent, at least, upon the type of patient as well as upon the type of germ.

The frequency with which virulent Type IV pneumococci are encountered in pneumonia in Pittsburgh would suggest that there may be other fixed types of pneumococci which have not been determined.

When we look to other sources to bring out the disease propensity of pneumococcus Type IV, it is found that this organism plays a very important rôle. The incidence of the pneumococcus types in 128 examinations of materials, including pleural fluid, spinal fluid, pericardial fluid, peritoneal fluid, mastoid pus, and lung pus done in the St. Francis Hospital laboratory are shown in Table V. The high incidence of Type III is due to the large number of Type III organisms found in lung cultures during 1918 (16 cases). Of the 57 Type IV pneumococci, 37 were found in such important inflammations as empyema, meningitis, and mastoiditis. These figures, taken with those at the Singer Memorial Research Laboratory, give a total of 94 pneumococcus Type IV cases, 74 of which were concerned as etiologic factors in the above-named three conditions (Tables II and V).

When one reviews the data obtained on the incidence of Type IV pneumococcus in the sputum, blood, and from other no less important sources it is difficult to conceive of an organism with more definite invasive qualities. From the experience with pneumococcus Type IV as a blood-stream invader, one would be justified in classifying it along with pneumococcus Type I, which latter organism was found in the blood in 31.25 per cent at the Singer Memorial Research Laboratory, and in 38.03 per cent at the St. Francis Hospital Laboratory, the figures for the Type IV organism being respectively 31.25 per cent and 35.47 per cent.

From the evident aggressiveness of the Type IV organism exhibited by these figures, it is difficult to understand why the Type IV organism is not transferred in virulent form from case to case, or why it is not transmitted in what is said to be an avirulent form from an apparently normal mouth to a susceptible individual. If we believe in carriers, our experience would tend to show that the apparently healthy individual with Type IV pneumococcus in his mouth possibly may be a Type IV pneumococcus carrier. The same reasoning may be applied to Type III pneumococcus, an inhabitant of the normal mouth. This would indicate particularly hardy qualities for the Type IV organism, which we know to be possessed in marked degree by pneumococcus Type III. The disappearance of the Types I and II from the mouths of convalescents from pneumonia may be predicated on the basis of susceptibility of these organisms, a fact which is demonstrated very nicely by the comparative ease with which experimental animals may be immunized by the Type I organism. This also applies in a degree to the Type II pneumococcus. The reappearance of pneumococcus Type IV in the mouths of convalescents from fixed-type pneumonia would imply the natural carrier state again in ascendency, biologic mutation, or overlapping of types, a subject much discussed in some quarters.

TABLE VI

SUMMARY OF PNEUMOCOCCUS TYPES

Type	I	II	III	IV	Totals
Sputum	388	380	349	1,407	2,524
Blood	99	35	39	93	266
Sources Indicated in Text	35	26	53	94	208
Totals	522	441	441	1,594	2,998
Per Cent	17.08	14.64	14.64	53.17	.....

A review of the types of pneumococci found in a total of 2,998 cases, including 2,524 sputum typings for pneumococcus, 266 classified pneumococcus positive blood cultures, and 208 classified pneumococci isolated from sources indicated in the text are shown in Table VI.

From these figures it is readily seen that pneumococcus Type IV is chiefly concerned in the morbidity of pneumococcus infections in Pittsburgh. Furthermore, the frequency with which

virulent Type IV pneumococci are encountered in pneumonia in Pittsburgh would suggest that there may be other so-called fixed types of pneumococci which as yet have not been determined, or that the present conception of the pneumococcus types is lacking in essential details.

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ABSTRACT OF DISCUSSION

On the Relation of Bacteriology to Clinical Medicine

D. H. Bergey, M.D. (Philadelphia, Pa.): One phase of Dr. Marshall's paper interested me very much, in view of some studies that were made under our supervision at the University last winter by Dr. Kreidler.

Dr. Kreidler had as the subject of his thesis for his doctor's degree the bacteriology of chronic endocarditis. We limited him to a small number of patients in order not to have so large a group of bacteria as to make interpretation too difficult. Out of fifteen cases, fourteen were streptococcic infections of the viridans group, and one of the hemolytic group. In studying the reactions of the serum of these patients, Dr. Kreidler was able to find antibodies, both agglutinins and complement-fixing antibodies, in the blood, but when rabbits were immunized with these organisms and serologic reactions tested, to our great surprise it was found that there was no uniformity between the different organisms and the serums. A rabbit immunized against streptococcus No. 1 would show agglutination for that organism but for none of the other thirteen viridans group. Each organism from these fourteen patients appeared to be an individual species. That seems unbelievable, but in spite of the most intensive study we could get no further light. It does not seem possible that organisms against which patients manufactured antibodies could be so complex that each organism causes diseases only of a particular type, and if so that it can bear a direct etiologic relationship to that disease.

The mere fact that the laboratory findings show a streptococcus of the viridans group in a case of chronic endocarditis does not warrant us in saying that this is the sole cause of the disorder. I believe the time has come when we must look for another factor, and that the streptococcus is merely an incidental factor in the infection of the blood stream.

CASE OF COINCIDENT DIPHTHERIA AND VINCENT'S ANGINA

Robb Spalding Spray, Morgantown, W. Va. (*Journal A. M. A.*, April 16, 1927), observed, in patient's throat, a whitish, albuminous membrane. A swab was submitted to the city laboratory, where direct microscopic examination revealed myriads of spirochetes and fusiform bacilli. An immediate report of Vincent's angina was made. On the following day, however, the cultures showed a very profuse growth, almost in pure culture, of diphtheria bacilli of the slender, granular type.

EAR, NOSE, AND THROAT FINDINGS IN 9,751 EXAMINATIONS OF COLLEGE FRESHMEN FROM 1920 TO 1925 INCLUSIVE*†

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These examinations were part of the regular entrance examination of the physical development of the student as he enters college. They were made by a number of examiners: Drs. R. Tait McKenzie, Charles Wharton, George Wilson, R. S. Boles, Hunter Scarlett, A. Light, Douglas Macfarlan, Temple Fay, J. H. Arnett, and myself. The fact that these examinations were made by at least ten different examiners during the last six years removes any possibility of bias which one examiner might have.

The examinations are conducted as follows: A freshman is given a card which he fills out as far as he has been instructed, and presents himself for examination in the gymnasium. After removing his clothing, he is first weighed and measured, and then he is sent in to the physician's examining room where the whole examination is made by one of the above-mentioned doctors. Standing before a glass, his posture, spine, etc., are noted; then, reclining on a table, his heart and lungs are examined.

Then follows the examination in which we are interested—the nose, throat, and ears. The student is brought over to a good light, or a flashlight is used, and his throat is examined for the condition of the tonsils or other pathologic conditions that may exist in the mouth and throat, including the teeth. His nose is examined for external deformity, deflected septum, polyps, blocking of the nares, or anything that might interfere with breathing. If he gives a history of sinus disease it is noted. Following this, his ears are examined for external appearances, cerumen, mastoid, and hearing, using a tuning fork for hearing and an otoscope, if necessary.

Ideal Examination

The late war gave many of us an opportunity to assist in the examination of thousands of men. You may remember that a soldier started in the morning going from one examiner to the other until he was completely examined, vaccinated, fingerprinted, etc., all in one seance. This, of course, is the very best way to conduct an examination of the whole body. One physician for each principal examination—one examiner for posture, spine, contour of chest, external condi-

*Read before the Section on Eye, Ear, Nose, and Throat Diseases of the Medical Society of the State of Pennsylvania, Philadelphia Session, October 14, 1926.
†From the Department of Physical Education, University of Pennsylvania.

tion of the body, skin, limbs, and feet; another for the heart, lungs, abdomen, and kidneys; and a third for the eyes, ears, nose, throat, neck, and thyroid gland. We hope to have such a unit at the University of Pennsylvania in the near future.

CONDITIONS NOTED

Table 1 shows some of the conditions noted in each examination. Defective hearing ranks next to flat feet and flat chest in frequency. Diseased tonsils and hypertrophy of tonsils make up about 20 per cent of the conditions found.

It is necessary that we have some standards to go by in these examinations, and at first it is a little awkward for an examiner, but after some practice it is rather remarkable with what speed and accuracy examinations are made, not infallible, but almost always nearer right than wrong.

The normal tonsil. Tonsils that are pale in color, small, even in outline, with pillars free from congestion, and not associated with attacks of tonsillitis or other constitutional diseases, we describe as normal or negative. This condition was present in about 3 per cent of the group studied, as will be seen by table 2.

TABLE 1

FINDINGS AT PHYSICAL EXAMINATION OF FRESHMEN AT THE UNIVERSITY OF PENNSYLVANIA

Year	*1924*	*1925*
Number examined	1,600	2,079
Flat feet	22%	28%
Defective hearing	13 "	16 "
Flat chest	24 "	15 "
Diseased tonsils	10 "	13 "
Poor posture	10 "	12 "
Constipation	11 "	11 "
Round shoulders	5 "	10 "
Enlarged tonsils	9 "	9 "
Curvature of the spine	7 "	9 "
Low shoulders (R. & L.)	11 "	9 "
Obstructed nostrils	1 "	5 "
Heart condition	5 "	5 "
Defective vision	6 "	4 "

Diseased tonsils are those that are manifestly diseased the moment we look at them; those that are not so bad looking, but have congested pillars; those that are buried, having congested pillars, or coupled with a history of sore throat, pharyngitis, laryngitis, frequent colds, heart disease, rheumatism, chorea, and other conditions which are due to focal infection. Again, if we find enlarged glands in the neck, this makes us more apt to suspect either the tonsils, the teeth, or sinus disease, and we suggest that the student be reëxamined. Table 2 shows that diseased tonsils were found in from 6 to 13 per cent examined.

Hypertrophied tonsils. A certain number of tonsils appear to be simply enlarged without any other sign of pathology. These we class as hypertrophied, and they average about 9 per cent.

Tonsils excised before coming to college rose from 5 per cent in 1920 to 33 per cent in 1924, but dropped to 29 per cent in 1925. There was a corresponding increase in the number of diseased tonsils in 1925.

Tonsils reappearing after excision. For several years we noted carefully the recurrence of tonsils after removal. The average was about 2 per cent.

Uvula. Elongated uvulæ are occasionally seen.

Nose. External deformity: From time to time we note students with external deformity of the nose which mars the appearance to such an extent that we suggest correction.

Deflected septum and blocking of the nares. We ask the student if he has any difficulty in breathing through his nose, or if he has been told that he snores when he sleeps. If he answers yes, we try to see in a general way if there is any gross obstruction by having him blow out first through one nostril and then through the other, closing the opposite nostril by pressing against the side of it with the finger. If we find obstruction we refer him for further examination.

Ears. Slight deafness is one of the most common defects of all students. This may be caused by a great many things: (1) cerumen, (2) nonsuppurative otitis media, (3) suppurative otitis media, (4) otosclerosis, (5) cholesteatoma, or (6) polyps in the external canal. The amount of hearing is still the bugbear, and we are installing an audiometer to examine groups at one time. This will give us a more accurate determination of the actual hearing. At present we use a medium fork with knee blow, and with a little practice one can get a fair but not very accurate measurement of the amount of hearing. The otoscope is always handy for examination of the drumheads and the amount of cerumen. Ten per cent of the freshmen have the external canal blocked with cerumen. This frequently lessens the acuity of hearing.

Mastoid. Latent mastoiditis is found each year. This is extremely important, and we are happy that we have saved a number of students' lives by giving them the proper warning. Permit me to give one example of the value of such warning: A student from Washington, D. C., was warned at the time of his examination of a latent mastoid condition associated with discharge of the middle ear. Some months later he was taken with a severe pain in that ear. He immediately sought medical aid, was operated

TABLE 2

Percentages of Ear, Nose, and Throat Findings in 9,751 Examinations

Year	1920	1921	1922	1923	1924	1925
Number Examined	1,700	1,415	1,341	1,616	1,600	2,079
	%	%	%	%	%	%
Normal Tonsils	3.6	2.4	3.0	3.0	3.2	3.0
Diseased Tonsils	6.0	7.0	11.0	10.0	10.0	13.0
Hypertrophied Tonsils	9.5	8.0	13.0	8.0	9.0	9.0
Tonsils Excised Before Entrance	5.0	7.1	15.0	29.0	33.0	29.0
Tonsils Reappearing After Excision	....	....	1.8	2.0	2.0	....
Defective Hearing	13.2	13.0	12.0	22.0	13.0	16.0
Referred for Additional Examinations	30.0	31.0	28.0	44.0	45.0	47.0

upon by Dr. E. B. Gleason within 48 hours, with recovery, although the infection had extended to the dura. A number of such examples might be given.

It is interesting to note the vast number who have some nose, throat, or ear defects on entering college.

The student is advised as to his condition, and requested to see his own physician for confirmation of findings and treatment. If he comes from a distance he is given an opportunity to have another confirmatory examination and recommendation of treatment without charge. We do not, however, encourage free treatments unless the student is unable to pay.

In a subsequent paper we shall bring out the improvement noted in the students during their stay in college.

A résumé such as this calls attention to the conditions now existing. Notwithstanding the large amount of work done in schools, there is still a vast amount of corrective work remaining to be done, even in picked men such as now enter college. This is also true of women.

I desire to express my appreciation to all the above-mentioned physicians, and especially Dr. R. Tait McKenzie, Dr. Charles Wharton, and Dr. E. B. Gleason.

Medical Arts Building.

ABSTRACT OF DISCUSSION

R. Tait McKenzie, M.D. (Philadelphia, Pa.): Ever since 1904 we have examined our freshmen at the University of Pennsylvania in order to find any defects that may have a handicapping effect in their college course. This gives us a unique opportunity to compare the variations within the normal, as well as those which overstep the normal. The line between normal and abnormal is sometimes hard to define.

From time to time we have issued reports on the condition of the students' teeth, on the relative frequency of various posture defects, on conditions of the heart and the occurrence of murmurs in the apparently normal, on the condition of the students' eyes and what was done to correct defects, and now Dr. Stout is presenting this preliminary report of his investigations of conditions found in the nose, throat, and ear.

The tonsil has been considered as somewhat of an anatomic criminal, very much like the appendix—when found it ought to be removed. Yet very often the after verdict is "not guilty." It surely must have some useful function if it would only behave itself. The connection of the tonsil with various other infections, particularly of the sinuses, has not been fully investigated as yet, although this field is full of opportunity.

In examining a large number of men, it seems impossible to secure the accuracy necessary for a complete and thorough test of the hearing, so we merely determine whether or not they can hear, and refer those with defective hearing to the specialist for a complete test. We do not undertake treatment, but refer those needing it to the physician of their choice.

E. B. Gleason, M.D. (Philadelphia, Pa.): It is impossible not to be impressed by the value of physical examinations that detect at the beginning of a college course defects which, if uncorrected, would greatly impede the development of the student. Errors of refraction and deafness are very serious handicaps, and if undetected may have results as serious as though the student were of inferior intellect. If of a sensitive nature, he is made supremely unhappy by his failure to keep up with his fellows easily, and is apt to develop the so-called inferiority complex if subjected to nagging or ridicule.

The life of the student with chronic mastoiditis, referred to by Dr. Stout, was probably saved by prompt operation. I knew of a student who died from an intracranial complication of a neglected chronic suppurative otitis. In another case of suppurative otitis, polypi, and cholesteatoma, the hearing improved and the otorrhea ceased as the result of conservative treatment. In a third case, following a radical mastoid operation, the whole middle ear and meatus had filled with granulations. These were destroyed by applications of a stick of silver nitrate until the parts had epidermatized.

Douglas Macfarlan, M.D. (Philadelphia, Pa.): Dr. Stout's figures are large enough to be of real value; the element of doubt always enters in when dealing with a small group.

What is a deflected septum, and how many are pathologic? I believe it is the intention of this paper to define a deflected septum as one that is productive of pathology of an obstructive nature, or of the deafness that often follows poor aëration of the eustachian tube.

What is deafness? In time we shall probably have a standard, so that the patient who does not hear at a given figure when tested by certain instruments will be classed as handicapped. A student whose hearing is sufficiently defective is handicapped in his education. This refers to unilateral as well as bilateral deafness, as is shown by the recent work of Newhart and Fletcher. At the present time we are just on the

threshhold of establishing these principles of the percentage of hearing.

MARION H. REA, M.D. (Philadelphia, Pa.): Such a study is pertinent at this time when physical examinations are being stressed by both professional and lay organizations. In the Women's Department of Physical Education of the University of Pennsylvania we are not equipped, as they are in the men's department, with attending nose and throat specialists to assist with special examinations of the new students. Nevertheless, the general examiner, with the aid of the tongue depressor and otoscope, can achieve a great deal, although the pharyngoscope is probably wielded with less efficiency.

It is often difficult to pass judgment on a tonsillar condition. Decision may be based on four factors: (1) The appearance of the tonsillar tissue itself. (2) Past history of the patient regarding colds, sore throats, tonsillitis, rheumatism, chorea, or heart trouble. (3) Cardiac findings. (4) General physical condition; i.e., undernourishment, easy fatigue, menstrual irregularities, etc. In the event of these four factors being indeterminate, we give the patient the benefit of the doubt, and let the events of the school year decide whether a tonsillectomy and adenoidectomy is imperative. A definite attack of tonsillitis, prolonged or frequent colds, inability to increase weight, even with forced feeding, etc., will be strong points in favor of operation.

DAVID L. GIARTH, M.D. (Ford City, Pa.): As an ex-public-school inspector, these figures are extremely interesting to me. Public-school inspections are hurriedly made, and it is difficult to be accurate in percentage of disease conditions found. It would certainly add much to our information if such statistics could be tabulated, and it is unfortunate that more of this work is not done in the smaller cities. Our percentage of defective hearing was very similar to Dr. Stout's figures. Diseased tonsils and adenoids affect the function of hearing, and should be eliminated. The public-school inspectors report them, but they are not followed up, although there is an effort being made now to put this responsibility on the teachers. The parents are so frequently indifferent that it is difficult to secure coöperation from them.

I appreciate the attention this subject is receiving from physical directors.

A PRACTICAL METHOD OF PERIODIC HEALTH EXAMINATION*

FRANCIS ASHLEY FAUGHT, M.D.

PHILADELPHIA, PA.

A health examination is a thorough physical and mental appraisal of an individual made by a competent physician. Its purpose is to detect early physical and mental impairment and faulty habits of living, which, if unchecked, may result in physical and mental disability, with a view to their correction before permanent disease results.

A periodic health examination should assist the individual in postponing and combating physical and mental decay, and, by forcing him to repeat at regular intervals his personal stock-taking, aid him in discovering departures from normal of which he is unaware, and which, if undetected, might lead to serious and permanent infirmities. It will protect him from unintentional neglect on the part of his physician, who, falling into the rut of familiarity, is apt to feel that he knows his "old" patient so well that he need not study him, and depending on his uncertain memory for important facts, forgets much, once known about him, which should be applied to the promotion of health and the prevention of disease.

The form for recording a health examination should afford the examiner a usable outline for a methodical medical survey which should combine brevity with thoroughness, yet remain within the capabilities of the average physician. It should be of such length that a comprehensive examination can be made in a reasonable length of time. The time element in health-examination work is important. No examination should be so exhaustive that the time required to complete it shall put its cost beyond the average patient's means. This is an essential point if health examinations are to become popular, because if the cost of the first be too great, the patient will be deterred from returning at the proper time for reëxamination.

Most persons examined will be found to have some impairment, and the majority, more than one. The number and character of the defects found will vary considerably with the health and social status of the individual. Usually the patient is unaware of his defects, many of which could have been prevented by an earlier examination.

A satisfactory health examination should include a record of gross abnormalities of the bones, joints, spine, and feet; the condition of the skin, noting eruptions, moles, warts, and birthmarks. The appearance of the mucous membranes, conjunctiva, and sclera should be noted. The condition of the superficial vessels, both arteries and veins, and the presence and location of cyanosis, if present, should be recorded.

Body conformation, build and posture, weight and height, should be investigated and compared with the normal. The chest in expansion and contraction, the abdominal girth, and the height and breadth of the abdominal cavity should be measured and recorded in inches or centimeters. Localized accumulations of fat and other enlargements, such as the thyroid and superficial lymphatic nodes, are of importance, as is the

*Rewritten and condensed for publication from an article read before the West Branch of the Philadelphia County Medical Society and the West Philadelphia Medical Association, February 25, 1926.

condition of the musculature, with special reference to the condition of the abdominal wall.

Gross defects in ocular movements and in vision are noted, and the condition of the pupillary reflexes recorded. Also, if glasses are worn, the age and origin of the present prescription.

The nervous system should be observed only from the standpoint of gross abnormalities, loss of function, and the condition of the commonly elicited deep tendon reflexes, including Romberg's sign. Greater detail here does not seem advisable, as it is often impossible.

The condition of the mouth, including the teeth, whether dead, capped, or missing, the ability of the patient to masticate properly, the presence of malocclusion, of pyorrhea, recession, or gingivitis, should be investigated. The date of the last dental examination and treatment should be noted.

The tonsils, including the anterior pillars, the tongue for furring and tremor, and the pharynx should all be carefully inspected. The nose should be examined for obstruction, and the condition of the septum, ethmoids, inferior turbinates, and mucous membrane noted.

The ears should be examined for canal obstruction, as by excessive cerumen or disease, the condition of the membrana tympani noted, and the fork test and other rough tests of hearing applied.

The chest should next be gone over very carefully by percussion and auscultation, and the type of costal angle noted. The examination of the heart should include its transverse diameter in relation to the transverse diameter of the chest, as the radiologist has shown conclusively that this relation is a better criterion of heart size than its absolute measurements. The heart should be outlined, the four valve areas studied, and the findings recorded.

Blood pressure, systolic and diastolic, should be estimated, both standing and reclining, and the heart work test then performed while the patient is in the recumbent posture.

The abdomen should be carefully palpated and all abnormalities noted, such as irregular contour, rigidity, undue relaxation, localized tenderness, and masses, especially in the region of the appendix, gallbladder, and stomach.

Women should always be examined vaginally or by rectum, while in men, hemorrhoids, fissures, prostatic enlargement, and hernia should be sought.

If the examiner's attention is directed by any unusual finding to a particular organ or part during the examination, then, naturally, a special study should be made of that region, in order to bring out, if possible, additional information.

I doubt if any one examination form can be devised to suit all examiners, and yet there should eventually develop a standard outline which, from general experience, will be found adequate. This, I predict will be a comparatively brief form.

About one hour is required to complete the examination as outlined above upon the forms arranged by the writer; and this is possible only when someone (nurse or secretary) acquainted with medical terms and familiar with the printed form is available to write the answers. Without help, a far greater time will be required, when, unless the examiner exercises great care in recording his findings, the finished report will be far less complete.

In order to interest my patients and acquaint them with the value of periodic health examinations, a form letter (which, in the course of time, has undergone several modifications) was mailed out to one member of the household of each of my patients. Upon the receipt of an inquiry regarding the examination, the patient is promptly supplied with two question sheets covering past and present personal habits, family history, previous medical history, environmental data, social status, and present conditions. Such details as the amount of exercise, sleep, rest, recreation, hours of work, diet, fluid intake, etc., must all be answered. Accompanying the questionnaire is a sheet of instructions for the accurate collection of a twenty-four hour specimen.

Upon the completion of the examination, the patient is dismissed without discussion or comment as to the findings. The answers as submitted by the patient and the complete examination record are read and carefully studied, when all irregularities and physical abnormalities discovered are underscored or checked with a red pencil. A summary of the findings and proposed advice is then made. This summary forms the basis of a carefully written letter in which the patient is advised specifically of all variations from normal, and, if apparent, their probable relation to each other. The letter also may include definite advice regarding changes in diet, increase in exercise, or other physical measures, closing with a series of recommendations which may be a request to return for additional special examination, or advice to consult one or more specialists for more complete study of some particular region or regions. Occasionally, when the indications are definite, immediate operation is advised.

For purposes of analysis, I have taken fifty consecutive examinations, recently completed, and have tabulated on a percentage basis the

more important data found. Of these fifty patients, twenty-one were males and twenty-eight females. The youngest male was twenty-nine, and the oldest seventy-four years. The youngest female was twenty-three, and the oldest seventy-three years. In addition to the findings tabulated, there were discovered several patients with pigmented moles, two cases of arteriosclerosis, one of internal hemorrhoids, one of ischiorectal abscess, one of psoriasis, and one of well-advanced chronic nephritis. Forty-two per cent were more than fifteen pounds overweight, the greatest being fifty-six pounds overweight. Sixteen per cent were more than ten pounds underweight, one being thirty pounds below the normal average weight table as prepared by the Life Extension Institute.

TABULATION OF FINDINGS

	Per cent
Mouth and teeth, chiefly gingivitis, incomplete dentures, and dead teeth	54
Tonsils, chronically infected	64
Nose	
Ethmoiditis	
Right	18%
Left	12%
Bilateral	16% 46
Septum	
Irregular	42
Obstruction	10
Eyes, requiring refraction	16
Ears	
Abnormalities	34
Impacted cerumen	14
Beginning deafness	22
Chronic otitis media	04
Eczema of external canal	02
Abdomen	
Relaxation	28
General tenderness	04
Excess fat	10
Visceroptosis	06
Chronic appendicitis	08
Colon stasis	04
Movable kidney	02
Adhesions	04
Gall-bladder disease	08
Heart	
Myocarditis	32
Poor effort response	08
Blood-pressure	
Hypotension, below 100 mm. hg.	08
Hypertension, over 140 mm. hg.	22
Highest, 250 mm. hg.	
Thyroid	
Enlarged	14
Toxic	02
Lungs	
Emphysema	02
Bronchitis	02
Early tuberculosis	02
Asthma (Toxic)	02
Feet	
Relaxed and pronated	30
Relaxed tarsal arches	12
Female organs	
Retroversion	20
Cystocele	02
Rectocele	02
Subinvolution	02
Fibroid	02
Lacerated cervix	08
Prostate	
Enlarged	20
Chronically infected	08
Hernia	
Umbilical	02
Inguinal, left	02
Incisional	02

This summary does not include all abnormal conditions found, but does give some idea of the frequency, variety, and distribution of defects. Naturally, most patients showed multiple defects, some potentially serious.

The most frequent advice given was a request for dental x-ray; the next was to consult a nose and throat surgeon. Several patients were advised to have gastro-intestinal x-ray studies made, and others an x-ray examination of the chest and heart. Several were advised to secure corrective shoes, and others abdominal supports. Many were given advice regarding exercise, diet, fluid intake, recreation, rest, etc.

In closing, I wish to emphasize the importance of the health examination, and to stress its great value in the study and management of all patients coming under the observation of the general practitioner.

5006 Spruce Street.

DEFINITIONS BY THE JUDICIAL COUNCIL

The Judicial Council of the American Medical Association, at a meeting held in Chicago, September 21, 1926, in response to specific requests, adopted the following definitions:

CONTRACT PRACTICE

By the term "contract practice," as applied to medicine, is meant the carrying out of an agreement between a physician or group of physicians, as principals or agents, and a corporation, organization, or individual, to furnish partial or full medical services to a group or class of individuals for a definite sum or for a fixed rate per capita.

SCIENCES ALLIED TO MEDICINE

By the term "allied sciences," as applied to medicine, is meant those subdivisions of general science that are held by teaching institutions of standing and reputation conferring the degree of Doctor of Medicine to have a place in the professional education and training of a physician.

A clear distinction should be made between a worthy poor person and a dead beat. Physicians are charitable in all ways, but insist that cause for charity be shown.

Seeing Pittsburgh with the State Society in 1927

L. G. Beinhauer, M.D.
Chairman, Publicity Committee

Not only is a most attractive program offered this year to the members of the Medical Society of the State of Pennsylvania, but Pittsburgh, the headquarters city, is full of interest to the visitor.



LOUNGE IN WEBSTER HALL
Residence hotel for men, near the headquarters for the Pittsburgh meeting of the State Society

Ideally bounded by the Y-shaped conjunction of its three rivers, the city has been given a point of vantage by nature for maintaining its position in the commercial and industrial world. Originally founded on a flat triangular piece of land, it has outgrown its original site until at present it comprises a vast territory surrounding its rivers.

Being richly endowed in natural resources—coal, oil, and gas—its very position—close to the eastern seaboard and in proximity with all large interior commercial centers—has assured its place as a leader in industrial manufacturing.

The "Steel City" of the world is widely known because of its many steel and iron industries which, together with its production of glass, paint, cork, and electrical appliances, add more glory to its industries. Its Monongahela River, whose annual tonnage of coal, steel, and iron alone compares with or exceeds the combined general tonnage of any three given world's seaports, is bounded on the south by the majestic bluff—Mt. Washington. Scaling this bluff are numerous (six) passenger and vehicle inclined planes whose constant up and down motions attract the eye of every visitor. Varying in size and inclination, these planes offer a long-remembered experience to visitors from the more level sections of the country. Piercing this bluff are two tunnels of greater than average length—one at Smithfield Street for street-car traffic only, and the other—twin vehicular traffic tubes—offer an outlet to the territory southward.



SWIMMING POOL AT WEBSTER HALL

Long has the city been known as the "Smoky City" due to its climatic and industrial conditions, but to-day, thanks to proper legislation, the name is a misnomer. Gradually supplanting the title of "Smoky City" is the "City of Bridges" applicable because of the numerous bridges under construction over both the Monongahela and Allegheny. Closely following the banks of the Monongahela on either side for miles above and below are its real assets—the steel and iron mills. Should one be interested in obtaining an everlasting impression, he is advised to ascend Mt. Washington by means of the Monongahela incline, walk along the brow of the hill, and view the city. This is especially interesting at night when the glow and fire of the steel mil's add much novelty to the view.

To the north of the Allegheny, one is offered a similar less interesting roll of hills. The Allegheny, too, is studded with minor manufacturing plants, and its banks harbor the Heinz Plant—the world's largest producers of the "57 Varieties." Daily visits can be made to this magnificent plant and visitors are requested to avail themselves of the opportunity.

The bridge-raising campaign along the Allegheny River is merely a forerunner of the proposed Erie Canal which will connect the Great Lakes and Pittsburgh, and the Allegheny will be an important link in its formation.

Traveling eastward along the Boulevard of Allies for about three miles, one finds himself within the Oakland district which harbors toward its south Forbes Field, the home of the Pittsburgh baseball team, probably the finest and one of the largest athletic stadiums in the country. Directly opposite, and resting within the bounds of the Schenley Farms, adjacent to the University Medical Buildings, is the Pitt Stadium, the home of the Pitt Panthers—as the football team of the University is nationally known. This open-air bowl ranks second to none of the country's largest football stadiums and contains all necessary requirements for all athletics at the University. Its capacity is 60,000.

Within the city are numerous first-class department stores, clubs, hotels, and theaters easily within reach of the other sections of the city. Within a radius of ten miles, numerous other interesting places can be visited. The steel mills at Braddock, Homestead, Duquesne, and McKeesport, together with the gigantic electric plant of Westinghouse at East Pittsburgh, add to the points of interest. Scattered and nestled in the hills are numerous nationally known golf clubs and parks.

Visitors to the Pittsburgh meeting should come early, and avail themselves of every opportunity to visit the many points of interest the city affords.

In last month's issue of the JOURNAL the exterior of Webster Hall was shown. This is a large new residence hotel for men only, and here a number of those in attendance at the session will be accommodated. This month the illustrations shown are of the interior of the building.

A record attendance is expected, and it is suggested that the members make their reservations early. All requests for rooms should be addressed to Dr. I. H. Alexander, Chairman of the Committee on Hotels, Jenkins Building, Pittsburgh, Pa.

THE COUNCILOR DISTRICT MEETING

In several states the Councilor district meeting is being featured as an aid to better organization, and better fellowship, as well as for the opportunities it provides for scientific discussions. Pennsylvania, Michigan, and New York have perhaps made greater effort and achieved greater success in the promotion of these meetings than have any other states, though there are others in which such meetings are being held regularly. The Councilor district society can be, *is being* made a distinct aid to the county society.

The secretary of the Wisconsin State Medical Society, in urging that these district meetings be held, offers some suggestions as follows:

1. Have some real leaders in scientific medicine on the program, for one appearance or, as is done in Michigan, for two addresses or clinical talks.
2. Limit papers to twenty minutes and allow plenty of time for discussions.
3. Register those in attendance.
4. Donate one period to periodic medical examinations.
5. Have a dinner.
6. Have the councilor of the district on the program.
7. Have one or more papers from members living in the district.
8. Have the president of the state society present. The secretary will be there.
9. Have the meeting at a time that will not interfere with other important meetings.—*American Medical Association Bulletin.*

Medicine has perhaps gone further than any other element of civilization toward breaking down the bars of nationalism, race, creed, and class. Finance, business, engineering, chemistry, education, even philosophy—none of these but is affected by the barriers which divide men. It is something to think about in a world most of whose forces drive human beings toward hurting one another.—*Public Ledger,* March 30, 1927.

The new doctor in a community often is a problem. Be kind and considerate toward the new man; and even though he gets all your practice (for you know nearly all new ones do that) be patient, and after awhile the new man will realize, from your example, that there will be great advantage to all in working together.

THE ATLANTIC MEDICAL JOURNAL

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Editorials

WHAT IS A VACATION?

A vacation, to some folk, is a grand jamboree, followed by a dark brown taste and a feeling like the morning after the night before. From the doctor's point of view, however, this is worse than no vacation at all. He believes that a vacation should be a means of re-creating the physical and mental forces so that the vacationer may return to his usual tasks refreshed and invigorated, ready to tackle the job again and conquer it.

To some people, work might actually be a vacation. Who of us is unfamiliar with the dissatisfied, unhappy individual, suffering mostly from ennui—which is just another way of saying that he, or usually she, does not have enough to do. To that person, a regular job which compels regular habits would be a boon.

To keep fit, the human requires regularity broken by enough of the spice of variety to prevent life from becoming insipid. Probably all of us need different amounts of spice properly to season our mental output. Some need more regularity, others more variety; so that an attempt to standardize the requirements would be futile. It is well known that some of us need more sleep than others; so it is probable that some need more vacation than others. It is probable also that, just as a decrease of the daily hours of work has not resulted in a decrease in the amount of work turned out, because more speed is possible in the remaining hours; so an increase in the vacation period might be found not to be a waste. The rested human organism can turn out more work of a better quality than the tired body or brain, and physicians are constantly meeting with examples of break-downs because of too great or too long-continued stress. The higher the quality of the work turned out, the greater is the need of appropriate vacations; although it must be admitted that the usual two-weeks' vacation of industry is scarcely long enough to relieve the chronic fatigue so prevalent among all classes of Americans, and that longer or more frequent vacations, *properly used*, would tend to produce better health. Doubtless, with the general trend toward increase of output by employment of machinery and consequent reduction of hours, this fact will eventually be recognized, and the average vacation period extended.

Considerable controversy has been aroused by the discontinuance of the spring vacation in the public schools of one of the smaller Pennsylvania cities. It was the expressed opinion of the school board that both pupils and teachers were demoralized by the usual vacation; while at least one principal is said to have held that only this respite saved some of his more high-strung teachers from breaking down. Time will tell which contention is correct, but the fact remains that teaching is a nerve-racking occupation, and the approval of tradition rests on the custom of granting longer and more frequent vacations than in any other profession.

Too much emphasis cannot be placed on the proper use of a vacation. To some of us the opportunity for study is a vacation. When one begins to feel stale and lacking in impetus, sometimes the best prescription may be a period spent in contact with some of the master minds of the land. In other cases, a new job in an entirely different atmosphere may create such an improvement in the state of mind as to be more than equivalent to a vacation in value. To the stay-at-home, travel may be the ideal vacation; while the habitual traveler may long for an opportunity to spend his vacation at home. Whatever his occupation, a man's vacation should be spent in a background totally different from his routine life.

However, it is necessary to warn the vacationer not to indulge in undue strenuosity. The sedentary worker is apt to feel that he has so little opportunity for physical exercise that he must pack his week ends and his yearly vacation to the full with unusual outdoor activities, not realizing that his confined life has utterly unfitted him for violent physical exertion, that a good coat of tan is not to be acquired in a day or two at the seashore, and severe sunburn is more dangerous than too little sunshine. He is apt to forget, too, that typhoid lurks in the most innocent-appearing water supplies, and that extreme care must be taken to guard against infection in unfamiliar localities. The appealing and ever-present hot-dog stand is a temptation that often overcomes the best-informed and most wary, but the report of the State Health Department on this subject ought to spoil the appetite of its readers for these wayside delicacies.

The vacation season is approaching, and the physician with foresight will not neglect to warn his patients of the dangers waiting for the unwary. He will not withhold the counsel of moderation in all sports, avoidance of undue exposure, care in choosing camp sites, discrimination in food and water supplies, unfailing attention to minor infections and ailments which may develop into more serious disease. He will not fail to suggest the danger of insect or snake bites, and the need of carrying a well-chosen first-aid kit, for vacation season is also accident season, and such a kit, coupled with training in its use, may mean the saving of a life.

THE FEEDING OF THE NORMAL INFANT AT BIRTH

It is quite refreshing to read the article with the title of this editorial, by Dr. Maynard Ladd, in the *Boston Medical and Surgical Journal,* January 13, 1927, as it is so unusual for anything to be written about the "normal," only the abnormal or the pathologic seeming to appeal to the writers of medical articles today. The author of the article is to be congratulated on giving full value to both breast and bottle feeding, and we can heartily agree with him when he says "the point is not so much the method which is employed as that some method should be used which permits accurate prescription and logical reasoning as to cause and effect." The statement that, when deciding on the length of the interval between feedings, the author is "quite content to accept the interval which best suits the baby" is surely in line with common sense and reasoning, although not in accord with much of the pediatric teaching of today. It would seem that those who prescribe a fixed interval between feedings, regardless of any or all other considerations, are having the convenience of the mother in mind more than the comfort of the baby, it being so common to hear a mother remark that she cannot make any definite plans to go anywhere or do anything if the baby is not on a fixed schedule for feeding, whether it needs it or not.

Attention is called to some of the various stages through which the so-called percentage feeding has passed, such as high and low fat, sugar and protein, and the best method of all is well expressed by the author when he states "the criteria of successful feeding are to be found in normal digestion, freedom from discomfort, regular and quiet sleep, and steady gain in weight." The feeding of a weak milk and barley-water formula to a baby 24 hours after birth is advised, to be "continued until the weights before and after nursing show a sufficient supply of breast milk," in this way doubtless often preventing the inanition fever frequently seen in the newborn, and, at the same time, avoiding the usual loss of weight during the first week or ten days after birth, which so many seem to consider as normal, and yet babies undoubtedly do better who do not experience this loss of weight.

NEUROPSYCHIATRIC EXAMINATION OF SCHOOL CHILDREN

Public-health officers are to be commended on the tremendous strides made in the protection of the physical health of the school child. Their attitude toward the mental health of the child is not quite so manifest. It is reasonable to suppose, however, that these men are keenly alert to the necessity of mental-health examinations, but are perhaps a little uncertain as to the method of procedure to be instituted or not sufficiently convinced as to the necessity for such examinations.

It would seem that the existence of so many vocational misfits, the increase in crime, and the demand for increase in the housing capacity for wards of the State (that is, the mentally diseased, defectives, and delinquents) are factors which tend to prove that we are dealing with a disease or condition manifesting itself early in the school life of the child. At this stage unhealthy mental states are recognizable, and this is the period when there is an opportunity to head off nervous breakdowns and mental retardation, and to institute guidance and supervision that will insure proper vocational election

and social habits, thereby controlling delinquency and crime to a remarkable degree.

What the public educator's reaction is, one hardly knows. It is a fact that the public school is the butt of all theories, fads, and fancies. Here, however, we are no longer dealing with passing fancies but facts—with civilization and its progress. The public school is the only place of mass gathering, the only effective agency through which we may work and concerted health efforts be made worth while.

Public concern? Of course, but vaccination is here to stay; diphtheria immunization likewise; and no sane, conservative layman would sell for gold or silver his child's immunity against smallpox or diphtheria. Who, then, if you please, would elect a wayward son headed for mental disease, delinquency, murder, and life in prison instead of the knowledge early in the child's life that it was abnormal and retarded mentally, requiring close guidance and supervision? Away with dogmatic tradition relative to mental disease and defect, and let enter the light of reason, discretion, and sanity in our approach to these problems.

Methods of procedure to insure examination are the simplest phase of the question. The will to do is the most important. The disposition of these cases, of course, is a problem. A superintendent of a large city or state public-school system, working in conjunction with a trained neuropsychiatrist on his staff, would in a short time round out an inexpensive system for such examinations and plans for training. Cost? Surely, but a reversible cost; that is, the money would be spent more for prevention and less for care. In the light of science, onward with the progress of civilization, and have such examinations made!

ON CHILDREN STARTING THE DAY RIGHT

In the March Journal, the editorial on "Poor Appetite in Children" presented the very important psychic phase of this subject, and advised letting the child alone if he does not want to eat. According to another correspondent, this method can be carried too far, for it has often been his experience to have children come under his care about midwinter—languid, anemic, who have not been eating for a long time, and not keeping up with classes or play. In such cases, only too often he finds that the child has been going to school without eating any breakfast, spending the morning in school on an entirely empty stomach, and consequently the other meals do not appeal.

This physician advocates a good breakfast as a regular habit—a glass of orange juice, a dish of cereal and cream, and a cup of cocoa. Such a menu fairly well meets the needs of the child, and if he wants anything additional he may have it, provided he first eats the regular meal. In the Doctor's experience, the only struggle occurs during the first week or two, and if the child knows that a certain breakfast will be ready every morning, and that there will be no argument or fussing about what he wants (which usually would end in his eating nothing), breakfast soon becomes a habit, and after a while is relished. It is still more ideal if the child is taught to have a bowel movement immediately after breakfast and before going to school. Our correspondent states that his experience with this simple routine has been sufficient to prove that it can be carried out to the benefit of the child, and that it improves the appetite for other meals.

He also adds this interesting suggestion: "The greatest single factor in accomplishing this procedure would be the teacher in the primary school if she realized the importance of a good breakfast before school. At that early age the child is most susceptible to impressions, and the teacher has unbounded influence with him. She could in various ways impress on the child the necessity of breakfast every morning. Health supervision in the schools is extensive, and has had immeasurable influence on health. The corps of school physicians and nurses have found many defects to correct, and there has been much preaching of wholesome food, clean teeth, good sleeping conditions, and many other good ideas on health and life, but sometimes the simple things are overlooked that might have an important bearing on the whole subject. The point I wish to make is that as a great help in keeping a child healthy it is necessary to begin the day right, and this can be done by developing a breakfast habit at the very beginning of school life. Then the child will no more think of missing his breakfast than of skipping his prayers at night."

Sometimes we think the parents are more in need of education and training than the child. There is no question that a nagging mother can do more to spoil her child's appetite than any other factor. Yet always to let the child have his own way may result not only in improper nutrition but also in character defects. Sometimes it pays to fight it out at first. The best way is not to let such a situation develop, and the wise and tactful mother will start training her child's appetite as a part of his conduct from the very beginning of his life. As a help in cases of unwise and untactful mothers, the teacher may well stress this matter of a regular breakfast as a part of her routine health teaching.

UNNECESSARY OPERATIONS FROM ERRONEOUS DIAGNOSES

While an erroneous diagnosis leading to an unnecessary operation is not usually a legal basis for damages, there are occasions when it may be, and from time to time medical journals record in their columns of medicolegal notes, abstracts of court records regarding the same. It is of interest to note the number of such instances where, upon operation, pregnancy was found to be the condition present.

To the lay mind it seems inexcusable that the diagnosis of pregnancy cannot always be made, either early or late. Yet the medical profession is cognizant of the difficulty experienced at times in determining pregnancy, even late in gestation, as evidenced by the fact that some of our best obstetricians and gynecologists have done abdominal section for what was supposed to be an ovarian cyst or a fibroid tumor, only to find, upon opening the abdomen, that the real condition was a normal pregnancy. There have been cases of advanced pregnancy in which the differentiation was so difficult that decision was withheld until an x-ray study was made, and in some instances the x-ray plates were negative. Based upon this latter report, operation was advised and accepted, and the surgeon, much to his chagrin, upon doing a laparotomy, found a normal pregnancy.

We would urge that all such patients be carefully examined under anesthesia before proceeding with the operation. If this is done routinely, the cases should be correctly diagnosed. There are numerous instances where an abdominal operation is advised, and a month or so will elapse before the patient is operated upon. Under such circumstances the surgeon should examine his patient again the day before operation. Failing in this, he surely should make a final examination after the patient is under the anesthesia. Any one active in hospital practice can detail experiences of his own and others where pregnancy was found upon examination under anesthesia, and an unnecessary operation obviated.

In the case of a married woman who was eager to become pregnant, and who was menstruating regularly, a dilatation and curettage and Wylie drain were advised. Some two months subsequently the patient completed with her physicians arrangements for admission to the hospital. No examination was made at the time of admission, nor after the patient was under the anesthetic. The uterus was dilated, no curettage done, and a Wylie drain introduced. Within forty-eight hours the patient aborted. She was about two and one-half months pregnant. We wonder how often an abortion is done in the promiscuous dilatation and curettage of the uterus which would have been obviated if the operator had made a pelvic examination under the anesthetic before proceeding with the operation. Naturally, in these cases, no report is made of the true happening to the family; but when an abdominal operation has been performed and pregnancy found, the picture is entirely different, and it is under these circumstances that malpractice suits are provoked. As a rule, in such cases no negligence is alleged in performing the operation.

In a case that was argued before the Texas Court of Civil Appeals, it was shown that the physician had suspected multiple fibroids of the uterus, but at operation pregnancy was found to be the true condition. It was further shown that the physician did not suggest examination under anesthesia, nor did he make such an examination. The court held "that evidence of the customary examinations made during pregnancy justified the conclusion that a further examination of the plaintiff would have revealed the true condition and would have enabled the physicians to correct their original diagnosis, and that the jury had a right to conclude that the failure of the defendants to make further examinations before operating was a lack of that degree of ordinary care which should have been exercised under the circumstances."

NEW LAW OF THE ROAD IN NEW JERSEY

Our members motoring on the highways in New Jersey are advised to read and be guided accordingly by the following: Commissioner Dill of the State Department of Motor Vehicles of New Jersey has issued a statement stressing changes made in the automobile laws by the Legislature. One change provides that cars entering upon a main thoroughfare from a side street must come to a full stop. A main thoroughfare is defined as any State highway route, any road, street, or turnpike upon which a trolley or bus line operates, or any other avenue so designated by ordinance.

That full-stop rule is a good one for any State, and ought to be enforced, or recognized, if it is not in form for enforcement, by every motorist. Sometimes it is known as the boulevard stop, but that designation is too restrictive, for the rule ought to apply on entering many streets and roads which cannot be classed as boulevards.

Another provision requires the driver following a trolley car to keep at least ten feet behind it, and to turn from the tracks when the car

stops. As provided heretofore in the law, no vehicle shall pass a standing trolley when the clearance is less than eight feet. Another act prohibits a driver leaving his car in lieu of bail when arrested. "Experience has shown," said Commissioner Dill, "that almost invariably the defendants did not really own the vehicles and claims were made showing that finance companies were the real owners. Consequently, the defendants escape penalty and the State gains nothing."

JOTS AND TITTLES

Peak Passed in Influenza Deaths

Deaths from influenza in Europe, where in recent months there has been an epidemic of that disease, have evidently passed the season's peak, according to statistics given in the monthly epidemiologic report of the League of Nations' health section. The high point of the outbreak was reached in January in the countries most severely affected, the highest death rate occurring in Geneva, Switzerland. Throughout Europe, chiefly persons beyond middle age have succumbed. In the United States, 1,942 cases of the disease were reported in the week ending January 8, against 1,718 in the same week of 1926; but in subsequent weeks the existing cases have been fewer than in corresponding weeks last year. Without suggesting any relationship between the earlier epidemics of the Far East and the European outbreak, the League report recalls that influenza spread during June, July, and August through the interior of China from Mongolia in the north to Yunnan in the south, and that an epidemic occurred in New Zealand, reaching its maximum late in July.

No Deaths from Diphtheria in Auburn

Not a single death from diphtheria in more than three years is the record established by the city of Auburn, N. Y., through the immunization of children by toxin-antitoxin. The last death occurred on March 9, 1924. Immunization was started in the spring of 1922 by the State Department of Health, with the aid of the city health officer and his staff. The conditions prevalent at the time were the worst in years. In 1921 there were thirteen cases of diphtheria in Auburn with thirteen fatalities. The city was selected by the State Health Department for a test of immunization, and 6,100 children were given complete immunization treatments. Negative results have been secured in 3,100 children re-Schicked. These statistics do not include treatment given by physicians, for which data are not available.

Help for the Disabled

No adequate facilities exist for finding occupations for persons suffering from many classes of physical disabilities, according to a report by the Welfare Council of New York City. Employers' prejudice against the engagement of handicapped persons is the chief contributing factor in the problem. That, with proper discrimination in the assignment of work, physically handicapped persons make desirable employees is evidenced by the facts that a large proportion of the handicapped for whom work was found by social agencies of New York last year were placed with firms which had had previous experience with handicapped workers, and that in some instances handicapped persons have been advanced to executive or other important positions.

In Philadelphia, executives of the social-service department of the hospitals of that city will initiate a bureau of employment for handicapped persons. Mrs. Ida E. Horton, director of social service at the Orthopædic Hospital, has convinced the social-service committee of that hospital of the need for such a service by pointing out the constant stream of handicapped persons who are served in her department and who are entirely without employment. According to an estimate made by the social-service department of the Samaritan Hospital, fully ten per cent of the patrons of that institution are without work because of some physical or mental defect which throws them off the normal course.

The Mortality from Automobiles

"Without question the problem of checking the wanton waste of human life and property due to the carelessness and recklessness of automobile operators is one of the greatest confronting the American public today," says R. I. Catlin, secretary of the Ætna Life Insurance Company. "It is estimated that 23,000 persons were killed through motor-vehicle accidents. The toll of human life taken by automobiles last year in the United States was at the rate of nearly three persons for every hour of the day, or sixty-two persons for every day of the year."

A Medical Motion-Picture Foundation

Dr. J. F. Montague, of the University and Bellevue Hospital Medical College Clinic, New York, is proposing that Mr. George Eastman establish and endow a "Medical Firm Foundation, Inc." for the purpose of producing and renting to medical (and in appropriate cases, lay) organizations films based on accepted and recognized medical books. He urges the educational advantage of the graphic method, and believes that such a scheme would assure the profession of an adequate supply of high-grade medical films.

Vital Statistics Bulletin

The Bureau of Vital Statistics of the Pennsylvania Department of Health issues a monthly bulletin on "the bookkeeping of human life." This bulletin is most interesting reading, and will be sent free of charge to any one interested. It presents the current reports in regard to natality, demography, morbidity, and mortality in the State. A request addressed to the State Department of Health will bring it to you. Interesting items appearing in the March number were to the effect that the death rates from typhoid fever, diarrhea and enteritis under two, diphtheria, and tuberculosis were the *lowest* ever recorded in Pennsylvania. Not a single death occurred from smallpox. On the other hand, the rates from automobile accidents, cancer, diabetes, and heart disease were the *highest* ever recorded. A map showing the distribution of diphtheria is also of particular interest.

Early Recognition of Personality Defects

"The first five years of a child's life.....are the years when undesirable habits, personality quirks, and mental defects should be recognized and treated," says Dr. D. A. Thom, in a recent publication of the United States Children's Bureau. There are 267,000 mental patients in public and private hospitals throughout the country—a larger number than all other medical and surgical cases combined. The cost to the taxpayer is enormous. "The great problem, however, is not in the

hospital patients, but in the thousands of men and women who go through life with only a limited degree of usefulness, because their minds are handicapped and clouded by unstable emotions. And the same traits that are seen in the young child who is disobedient, uncontrolled, and in conflict with his family and surroundings are those which are found in a greatly heightened degree in the mental characteristics of criminals." Early recognition is doubly desirable because the young child has certain mental characteristics which are more usable in altering undesirable habits than at any other time of life.

End of Orphanages Predicted

According to Sophie Irene Loeb, president of the Child Welfare Committee of America, there are 250,000 children in public institutions in this country. She predicted that within ten years there will not be an orphan asylum housing normal children in the United States, because increasingly authorities are seeing the necessity of housing children in private homes instead of sending them to asylums.

Sleeplessness in Children

"Many parents who worry and fume when children are restless or sleepless after going to bed are, without realizing their fault, aggravating the sleeplessness to a point which may seriously affect a child's health," according to Dr. Frank Howard Richardson, writing in *Children, the Magazine for Parents.* The following causes for sleeplessness are discussed: Apprehension, caught from his elders, that the sleeplessness is harmful; hunger; adenoids; too heavy bedclothes; too little ventilation; excitement of his imagination by unrestrained play or unwholesome stories; any activity that makes an unusual call upon his powers of endurance, such as an exciting party, unusual food, a long hike, or other physical overexertion. He should be taught that the sleeplessness is not harmful and that he will be getting his rest whether asleep or awake if he will lie still.

Cooking Odors in Schools

Unpleasant odors, due to noonday cooking in three of Philadelphia's oldest high-school buildings, recently prompted an investigation by the Board of Education in the interest of student health. It is deplorable that the older buildings are not equipped properly to ventilate the kitchens and lunchrooms. Conditions in these buildings where students buy lunches are "more detrimental to health than in the former years when students went outside for 'hot dogs,' pretzels, pies, and candy." Investigation would probably reveal analogous conditions in other cities of the State.

Chemistry in Medicine

Concluding an address before the Western New York Section of the American Chemical Society, Dr. E. H. Volwiler, chief chemist of the Abbott Laboratories, said: "Advances along the various lines indicated are significant, but they are only the beginning of efforts which must be made.....There are some 50 infective diseases that are important. Of these 50, the causative agents of 12 have not yet been discovered. Of the remaining 38, a partially successful curative agent is available in 11, leaving 27 diseases in which the causative agent is known but for which no specific treatment is available. To these must be added the 12 infective diseases of unknown origin, making a total of 39. In other words, in only about 20 per cent of the important infectious diseases have we made progress towards cures!"

The Mortality from Alcohol

This subject will be discussed from a scientific point of view by the biennial convention of State and Territorial Health Officers, to be held this month under the auspices of the United States Public Health Service. As expressed by the Philadelphia *Evening Bulletin,* "There is too much rabid raging about prohibition on both sides. A little scientific discussion may tend to a more tolerant and common-sense attitude, out of which alone can come settlement of many problems which prohibition has not so far disposed of."

MEDICOLEGAL AND LEGISLATIVE NEWS

Legislation of Interest to Our Members

Our membership may be interested to know the final disposition of certain of the bills introduced during the legislative session which closed April 14, 1927.

The "One-Board Bill" (House bill 1492) remained in committee; also the bills pertaining to naturopathy (Senate No. 423), chiropractic (House No. 933), chiropody, beauty parlors, and sale of milk (House No. 1489).

House bills 1480 and 1375, the first relating to annual registration of nurses and the second being an amendment to the act establishing a State Board of Examiners for Nurses, remained in committee. But Senate bill 865, regulating State registration of nurses was passed in amended form requiring one year of high school or its equivalent for admission to an approved training school for nurses.

House bill 1498, amending the medical clauses of the Workmen's Compensation Act, was defeated in the House. See statement by the Commission on Compensation Laws on page 525.

The bill legalizing the practice of spiritualism (Senate No. 924), also all bills regulating pollution of streams, and House bill 1386 authorizing sterilization of mental defectives remained in committee.

As a result of the several bills introduced pertaining to the healing art, a joint resolution (Senate bill 1326), "creating a commission to study the laws relating to the healing art, defining its powers and duties, and making an appropriation," was passed and is now in the hands of the Governor. This resolution creates a commission which will have a distinct bearing on all legislation that has been brought to the attention of our Legislature, and we should lend every effort to afford the commission all the assistance possible. The text of the bill appears in the following official report on legislation kindly supplied by the State Health Department:

Health Legislation in Pennsylvania

The Department of Health was interested in and sponsored certain bills which would improve the administration of the health laws of the State. All of them were passed by the Legislature and signed by the Governor. They are now law.

The first Bill, entitled "An Act to amend Section 16 of the Act approved the 27th day of April, 1905," changes the procedure with reference to the enforcement of the Act creating the Department of Health. Formerly, prosecutions brought under the Act of 1905 called for a court proceeding. This Act amends the law so that any violation of the law or regulations and orders of the Department of Health may be enforced by summary conviction before a justice of the peace, alderman, or magistrate in the county where such violation or offense is committed.

The second law relates to the establishment and maintenance of boards of health in boroughs and townships of the first class. Section one of the amendment gives boroughs and first-class townships the option of appointing a health officer or a board of health for the enforcement of the health laws of this Commonwealth. If a health officer only is appointed, he shall have all the powers and duties prescribed for boards of health and the same authority. All health officers appointed by boards of health or in lieu of a board of health shall have had experience or training in public-health work, and must be certified by the Secretary of Health. Section 2 of this Act prescribes the procedure for the appointment of a Board of Health. Section 3 provides for the preparation of an annual budget and the filing of annual reports by either the health officer or the board, as the case may be. Section 9-A which has been added to the Act of 1913 provides that any borough or first-class township may coöperate with the county or with any city in such county or first-class township as well as with the State Department of Health in the administration and enforcement of health laws.

Before this legislation was passed, boroughs and first-class townships were compelled under the law to have boards of health. The present provision makes it possible for such municipalities to eliminate boards of health, and in their stead to appoint a health officer who takes over the board of health's former duties, in this respect being on a similar scale with cities of the third class.

The third law relates to the coöperation of cities, boroughs, and townships with counties in which they are situated and with the State Department of Health, in the administration and enforcement of the health laws and rules and regulations of the Department of Health.

This law makes it possible for smaller boroughs to unite in the appointment of a health officer, and also permits county funds to be appropriated for the salaries of such officer. Heretofore, each single borough was compelled to have its own board of health. This will undoubtedly work to the advantage of the public at large, and should increase the efficiency of health control.

The fourth law amends Sections 9 and 10 of the Act of June 28, 1923, "to safeguard human lives throughout the Commonwealth" by providing for the reporting, quarantining, and control of communicable diseases. Section 9 of this Act places the responsibility for making periodic reports to the State Department of Health of the occurrence of communicable diseases in their jurisdictions upon the secretary of the board of health or health officer where a board of health has not been appointed; and Section 10 provides for the enforcement of the penal clause for the violations of the provisions of the Act.

This law holds directly responsible the secretary of the board of health in the event of a board of health being in existence, or the health officer in lieu of a board of health, for the reporting of communicable diseases to the Pennsylvania State Health Department. Heretofore, this law merely held all members of the board of health responsible, and experience indicated that prosecutions under it were not successful because of its general terms. The law now penalizes all violations of the Act. Heretofore, it penalized only certain special violations.

The fifth law, the Act of 1915 "relating to the conduct in the operation of public eating and drinking places," was repealed and a new Act substituted. This new Act goes into more detail with reference to the cleanly conditions of restaurants, public eating and drinking places in general, and also provides for the physical examination of all persons employed in or about restaurants and in public eating and drinking places. It further provides for the cleansing of utensils used in dining rooms and kitchens, and provides a better and more efficient mode of enforcement than the old Act.

In addition to the legislation above mentioned, a resolution was passed creating a commission to study the laws relating to the healing art. This is now in the hands of the Governor. The significance of this resolution is of general interest. Therefore, it is quoted verbatim:

A JOINT RESOLUTION

Creating a commission to study the laws relating to the Health Art defining its powers and duties and making an appropriation

WHEREAS There is at the present time an apparent need of comprehensive legislation governing education and licensure of persons to practice in the various branches of the Healing Art and

WHEREAS A wide difference of opinion exists as to the nature and type of legislation which should be enacted by the General Assembly therefore

Section 1 *Be it resolved by the Senate and House of Representatives of the Commonwealth of Pennsylvania in General Assembly met* That a commission is hereby created to be known as the "Commission to Study the Laws Relating to the Healing Art" Said commission shall consist of twelve persons ten of whom shall be appointed by the Governor of the persons so appointed one shall be licensed and qualified to practice as an allopathic physician one as a homeopathic physician one as an eclectic physician one as an osteopath and one shall be a chiropractor and one a naturopath and four shall be unprejudiced laymen unconnected with any branch or school of the Healing Art Profession

The Chairman of the Committees of Health and Sanitation of the Senate and House of Representatives for the Session of one thousand nine hundred and twenty-seven shall be ex-officio members of the commission

The members of the commission shall serve without compensation but shall be reimbursed for all expenses necessarily incurred in the performance of their duties

Section 2 The commission shall organize by the appointment of a chairman It shall have power to appoint a secretary and such stenographers and employes as may be deemed necessary and to fix their compensation

Section 3 It shall be the duty of the commission to study the laws of this State and other states and countries relating to the education examination and licensure of persons practicing the several schools of the Healing Art the laws regulating the various schools of the Healing Art and the administration of such laws to frame a bill or bills for the proper regulation control and administration of these various schools and of persons engaging or intending to engage in the practice of the Healing Art and to make a report of its work together with drafts of legislation it proposes to the General Assembly of one thousand nine hundred and twenty-nine not later than February first

Section 4 The sum of twenty thousand dollars ($20,000) or so much thereof as may be necessary is hereby specifically appropriated to said commission for the payment of the expenses of the members of the commission the compensation and expenses of the secretary stenographers and employes for printing and any other expenditures lawfully incurred in carrying out the provisions of this act

Compensation and Rejuvenation.—In March, the Hungarian Insurance Company was being sued at Buda-

pest for canceling an annuity contract because the beneficiary underwent a "rejuvenation" operation. It was the contention of the company that its calculations on how long the man would live did not contemplate "rejuvenation."

Labor Law for Women and Children.—A law has finally been placed on the statute books of New York State providing that working hours for women and children in industry shall be limited to forty-eight, but permitting that employers may require seventy-eight hours of overtime a year, to be distributed subject to the approval of the Industrial Board. This class of employees are also allowed a half holiday in addition to their regular one day of rest in seven, and may, in this case, work forty-nine and a half hours per week. While restrictive legislation for women workers is meant as a protection, there have been many cases in which it has worked a hardship, closing to women more lucrative and sometimes even lighter work that would be open to them if unrestricted. We are not convinced that such legislation is always an unmitigated blessing.

HOSPITAL ACTIVITIES

Summer Course on Administration Offered by Temple University.—A summer course in hospital and institutional management will be given at Temple University, Philadelphia, for the fourth time this year, during its summer session extending from July 5 to August 13. As in previous years, the course will be directed by Charles S. Pitcher, superintendent, Presbyterian Hospital, Philadelphia. The course is arranged both for those who are inexperienced and those who have had practical experience in hospital work, and abundant opportunity will be given for observation and field work in the general and special hospitals of Philadelphia. The curriculum will cover the following subjects: the organizing of a hospital; functions and principles of organization; administration; purchase and issuance; hospital accounting; histories and chart records, including medical and surgical cases coming under all of the special departments; food conservation; and construction, heating, and lighting. Departmental studies will include the training school, outpatient, laundry operation and management, housekeeping, functional organization studies of other departments, and field work.—*Modern Hospital.*

Is it Ethical to Assess Staff Physicians a Certain Sum in Conducting a Drive to Raise Funds for Building Purposes?—Physicians are placed on hospital staffs because it is felt that they possess a scientific skill which will be of benefit to the hospital's patients. In return for the work done, the bulk of which usually represents the free treatment of ward patients, the staff physician is allowed to use the hospital's private rooms for the treatment of patients from his own practice. Whether or not in this arrangement the hospital or the physician benefits most need not be considered as having particular bearing on the above question. Such an arrangement is the custom generally. Nor does it seem desirable to assign physicians as members of a hospital staff because they possess a large opulent clientele which will patronize the hospital's private rooms. To assess a staff physician a given amount of money in a hospital drive does not appear either ethical or in any way justified. Most staff physicians possess sufficient interest in the welfare of their hospital to contribute such a sum as their income will permit during hospital drives. The assessment of a physician rather suggests that he is paying this price for the privilege of being a member of the hospital staff. Would it not be better frankly to place the necessity of securing more funds for the hospital before a meeting of the institution's staff, and allow these physicians to raise as large a sum of money as possible, either by solicitation of their friends or by any other means that suggests itself?—*Modern Hospital.*

Acknowledging Gifts.—An experienced hospital executive brought out a point in a recent conversation that should be considered by every hospital. He referred to the perfunctory and uninteresting way in which receipt of donations of all kinds is acknowledged. This man considered the acknowledgment of any gift, no matter how small a matter, as deserving of personal attention so that the letter could express the gratitude of the hospital and indicate a personal interest in the generosity of the donor. Undoubtedly this is a question that may not be given sufficient attention in some hospitals, although one can easily appreciate the fact that a stereotyped and formal acknowledgment of a gift will cool the ardor of the donor.—*Hospital Management.*

Principles of After-Care for Sanatorium Patients.—The failure to reach and educate the families of patients is the one great defect of our present system of after-care for sanatorium patients. All who are working for the patient's ultimate recovery, that is, the sanatorium staff, the family physician, and the local health association, should unite efforts to see to it that before the patient goes back to his home, the members of his family are given an intelligent conception of the needs of his case so that they may coöperate in his after-care.—*Modern Hospital.*

How Efficient Are Hospital Sterilizers?—(1) Thirty pounds of steam should be available for sterilizing badly infected materials. (2) Twelve to fourteen pounds of steam is not sufficient for sterilization. There should be at least twenty pounds steam pressure and an exposure of forty-five minutes or more. (3) The sterilizer should not be tightly packed in order to allow more even and more rapid penetration of steam. (4) There is also a difference in steam penetration when large and small bundles are used. More time must be allowed for the sterilization of large bundles. (5) The Diack tube seems to be a good indicator of complete sterilization. It has a safety margin which is ample, as was shown in a test where the tubes were not melted at thirty and forty-five minutes, yet there was practically complete sterilization with eighteen to twenty pounds steam pressure.—*Modern Hospital.*

A Use for Flower Boxes.—What do you do with the many boxes that come to the hospital filled with flowers for the patients? The answer to this question would probably be, in most cases: "Why, put them in the refuse can, of course. Of what use are they?" Has it ever occurred to you that nearly everything might have some further use, or even an exchange or purchasing value, if thoughtfully considered? Well, so it is with flower boxes. In one hospital an arrangement was made with a local florist's shop whereby empty boxes are picked up on call. Not only boxes from the florist's own shop are saved, but all good boxes, an address sticker being placed over the name of the former box owner. In exchange vases of good type and in a sufficient number are received, so that none have been purchased in the past four years. Thus an entirely useless article becomes converted into a really necessary one with no financial outlay or labor involved.—*Modern Hospital.*

PUBLIC HEALTH

A Lay Journal's View on Health Education.—In an editorial entitled "Keeping Health a Secret" the need for more active participation by the medical profession in health education of the laity is discussed in the February 5th number of *Liberty*, "a weekly for everybody." The editor's views are summarized in the two statements: "It is probable that the next big forward step in health will be through controlled publicity," and "The ethical practitioner is coming to realize, mainly through loss of business, the necessity of instructing the general public in fundamental health principles, and the value of restricted and directed publicity. They must come to that or stay inside their ethical shells and permit the quacks, nostrum venders, and fakers to monopolize the field."—*Health News.*

New Color May Be Permitted in Food.—The admission of a new fast green dye to the permitted list of coal-tar colors that may be used in goods coming within the jurisdiction of the Federal Food and Drugs Act is being considered by officials of the Bureau of Chemistry, United States Department of Agriculture. The green color in question has passed the physiologic tests required, and it is expected that a formal food-inspection decision authorizing its use in foods will be issued soon. Only such dyes as are free from impurities and proved by physiologic tests to be entirely harmless are admitted to the permitted list for use in foods.

Syphilis Not Caused by Vaccination.—The statement that syphilis has been caused by vaccination has often been made by the opponents of this proven public-health measure. A most convincing reply has just been issued by the three Surgeons General of the Federal Government (namely, the Army, the Navy, and the Public Health Service) based upon the accumulated records for ten years of over 10,500,000 people who have been vaccinated against smallpox. As pointed out, syphilis is a disease confined to the human species alone, and as soon as the use of calf vaccine instead of human vaccine became universal *the possibility of transferring syphilis by vaccination was entirely done away with.*

In not one of the 10,500,000 cases referred to has syphilis ever been transmitted by smallpox vaccine. They also point out that no vaccine can be sold in interstate traffic in the United States until it receives the stamp of Government approval. The same kind of vaccine used by private doctors in vaccinating their patients was used by the Government officials in the vaccinations performed officially.

Sight-Saving Classes.—The time has come for the organization of an association of the teachers and supervisors of sight-saving classes to assume pedagogic leadership in this new and rapidly expanding field, declared Lewis H. Carris, Managing Director of the National Committee for the Prevention of Blindness, in an address before the Department of Superintendence of the National Education Association. The Committee is prepared to assist such an organization in a financial as well as an advisory capacity because of the conviction that sight-saving classes are of great importance in the general work of preventing blindness and conserving vision.

Careful studies indicate that over the country at large one out of every twelve children has vision defective to such an extent as to constitute an educational handicap, and one out of every 500 school children has such seriously defective vision that he cannot with profit be educated with the normal group. To save the sight of the latter group and to provide an education for them outside of schools for the blind, special sight-saving classes are needed in the public schools of the country, so that these partially sighted children, who in former years were frequently educated in schools for the blind, may be taught to use and conserve what sight they have. There are already 264 such classes in America, but there should be at least 5,000. The need for such special classes is as great or greater than the need for special classes for the crippled, the cardiac, the tuberculous, or the mentally deficient.

There is need, also, for a national agency which will serve as a clearing house of information for those engaged in this work, and for combined effort of ophthalmologists and educators to provide a fund of information which will further this joint effort of sight-saving and education. New York University, Columbia University, Peabody University, and the University of Cincinnati have already conducted courses for the special training of teachers for sight-saving classes, but there is a national need for the promotion of many more such teacher-training centers. In the conduct of all these teacher-training centers the National Committee has proceeded on the principle that any financial and teaching assistance which it might render would be of only a temporary nature and that the Committee would desire to withdraw from this field as soon as it was reasonably certain that the local educational institution could conduct such a class without financial loss.

The Associate Director of the National Committee is now engaged in a 9,000-mile tour of the country studying the operation of sight-saving classes in those communities already having them and assisting in their establishment in the many states in which there are still no provisions for the education (except in schools for the blind) of children with very seriously defective vision.

The proposed organization of the teachers and supervisors of sight-saving classes would have a threefold purpose: (1) the development of a professional *esprit de corps* among those already in the ranks, (2) the preparation and approval of pedagogic material which may be suggested for use in such classes, (3) the rendering of propaganda service in communities where their introduction is desirable and for their expansion where already established. The proposed organization should coöperate closely with the Joint Committee on Health Problems in Education of the National Education Association and the American Medical Association.

State Health Department News

The Pennsylvania State Health Department has again begun its work with the Diagnostic Extension Tuberculosis Mobile Clinics. This work will be under the general supervision of Dr. W. G. Turnbull, Deputy Secretary of Health. The field supervisor will be Dr. C. C. Custer, Assistant Superintendent, Mont Alto Sanatorium. The activities have already started in Union County. In discussing this work, Dr. Turnbull said: "A letter is being written to local physicians indicating that these activities are for the benefit of Pennsylvania's population in localities where regular State clinics do not exist. They are for diagnosis only, as a copy of the findings and recommendations is referred to the local physicians for action. The unit will not treat any cases. The excellent work which was accomplished last fall indicated a definite need for this

type of service. The work has been started early with a view eventually to covering many of the rural communities during the spring, summer, and early fall.

THE SECRETARY OF HEALTH, Dr. Theodore B. Appel, has just received the Ohio River Basin Inter-State Stream Conservation Agreement which has been executed by the official heads of the Department of Health in the following states: Pennsylvania, Ohio, West Virginia, Kentucky, New York, Maryland, Illinois, Indiana, and Tennessee. The present agreement is the outgrowth of one made in 1924 between the Departments of Health of Pennsylvania, Ohio, and West Virginia. It provides for the coöperation between the States party to the agreement in the control of stream pollution to the end that the water derived from such inter-state streams may be adequately protected. In addition, the agreement calls for a Board of Engineers to consist of the chief engineers of the Health Department of the States interested. Mr. W. L. Stevenson, Chief of the Bureau of Engineering, is its chairman.

IN COMMENTING ON THE alleged increase in suicides among the college population of the country, the Secretary of Health recently released the following: "In special reference to the so-called suicide epidemic, our statistics do not bear out any proportionate increase in the ages referred to, and if there is any increase among students, it is due to a condition often observed in other fields, namely, the urge of imitation."

INDUSTRIAL MEDICINE

Occupational Dermatoses.—This subject is discussed at some length in an interesting paper by R. Prosser White in the September, 1926, number of the *Journal of Industrial Hygiene*. The majority of industrial physicians hardly realize that occupational skin diseases present a greater variety of lesions than those of syphilis and tuberculosis combined, and that some show a longer latent or incubation period than the parasyphilides. The most common error in diagnosis is to mistake a primary, internally produced skin disease for its traumatic counterpart. The former often runs a tedious and prolonged course; the latter, with few exceptions, has definite limit. The physician must be able to recognize whether or not the patient has a congenitally normal skin. He must be familiar with the ordinary and usual repair processes of the skin. He must be on guard to prevent secondary infections and to recognize their occurrence. He must ascertain whether or not the agent blamed is liable to or has been proved to cause a dermatosis, or is active enough to further the spread, or to restart a relapse of a prior dermatosis, and he must recognize whether the irritant has a tendency to produce sensitization.

The paper gives in tabular form the distinguishing features of occupational dermatitis or traumatic eczema, contrasted with those of idiopathic eczema. The former starts around follicles, shows usually a brilliant initial erythema, develops pinhead vessicles remaining discrete and increasing only so long as the irritant is present. Exudation is not copious, and the inflammation does not recur when irritation is removed. Among tendencies which lengthen prognosis are listed individual peculiarities of the skin, hereditary structural defects, ichthyosis, Raynaud's disease, chilblain, epidermolysis, bullosa, dyshidrosis, etc. Immaturity or a senile epidermis bears irritation badly. These risks may mostly be eliminated in industry by examinations prior to employment. Under primary effects the author states that all agents which directly destroy the horny layer show a prompt effect; as with the immediate solvent action of alkalies, etc. Here risk is always present as long as a man has to work among these materials. The sores produced are superficial rather than deep. Other substances, such as chrome, appear to have little or no effect on the stratum corneum. Here danger comes with breaks in the epidermis, when oxidation, etc., begins. Lesions are deeper and slower in healing.

Much space is given to the discussion of malignancy. Certain forms of irritation never lead to malignancy. For this outcome there must be a specific tendency in the tissues and a specific activity of the agent. Only those agents which can set up a proliferation of the epithelial tissues possess carcinogenic properties. Among such agents are specially discussed arsenic, petroleum and whale oils, tar and pitch. Irritation carcinomata are invariably prickle-celled or squamous-celled in type.

Sensitization is stated to be of two varieties: the more common anaphylactic or protein allergy, and anaphylactoid, due to certain nonprotein substances, chiefly vegetable products, which bring about cellular or tissue sensitization. Proved examples from the chemicals used in industry are rare. In 50 per cent a hereditary congenital predisposition to these vegetable or chemical substances is found. To prove sensitization it must be shown that the agent is one capable of sensitizing, and that the person is capable of being sensitized. In order to make a reasonable diagnosis or prognosis of an industrial skin affection the chemical and biochemical actions of the causative agent must be known.

The author gives the following classification of the dermatergoses: mechanical or physical agents; detergents (all substances which emulsify skin lipoids and thus increase the irritant action of other chemicals); anhydrids and desiccators; hydrolizers; keratin solvents; protein precipitants; oxidizers; reducers; agents liberating free acids from salts or forming toxic nitro-derivatives; keratogenic and neoplastic agents (carcinogenic); sensitizers, anophylactoid; anaphylactic proteins.

"Clean Hands" Demand Washing Facilities.—A lecturer was surprised at remonstrances from an audience to whom he had discussed the importance of "the mere washing of hands on the part of workers in industry before eating" to prevent poisoning by lead, arsenic, chrome colors, etc. The complaint was that washing facilities were oftentimes so inadequate as to render his observation practically void. Granting such, the lecturer stated that many of the best health producers can be had for nothing, for example:

It costs nothing to stand up and walk and breathe properly.

There is no expense attached to taking a few simple exercises every morning.

It costs nothing to select the food best suited to the body.

It costs nothing to clean the teeth twice a day.

It costs nothing to stop using patent medicines.

It costs nothing to have a cheerful, happy disposition, and stop having grouches.—*N. Y. Industrial Hygiene Bull.*, 3:1 (July), 1926. (State Dept. of Labor, Albany, N. Y.)

THE MEDICAL SOCIETY

OF THE STATE OF PENNSYLVANIA

OFFICERS' DEPARTMENT

WALTER F. DONALDSON, M.D.
Secretary
8062 Jenkins Arcade Bldg.,
Pittsburgh, Pa.

CONTRIBUTIONS

Contributions to the Medical Benevolence Fund of the Medical Society of the State of Pennsylvania received since March 25, 1927, but not previously acknowledged in the columns of the JOURNAL are as follows:

Harold L. Foss, Danville	$25 00	
Arthur H. Gross, Bellevue	25 00	
Henry K. Pancoast, Philadelphia	25 00	
Breese M. Dickinson, Pittsburgh	10 00	
Jefferson H. Wilson, Beaver	10 00	
		$95 00
Previously reported		1,335 00
		$1,430 00

This liberal response of our members to the appeal of the Committee on Medical Benevolence has been encouraging. Contributions or pledges may be sent to Walter F. Donaldson, Secretary, Jenkins Arcade Building, Pittsburgh, Pa.

COUNCILOR DISTRICT MEETINGS

Section 4, Chapter 3, of the By-Laws states that "each Councilor District shall hold one or more district meetings each year for the purpose of increasing acquaintance, good fellowship, and organization among the physicians of the District." This year, therefore, eleven such meetings should be held throughout the State. The success of these meetings will depend upon the careful, thorough planning in advance of the Councilor in each District and the District Censors of the Councilor District, as well as the officers of the county medical societies involved.

The officers in the county societies wishing to undertake this project will, upon request, receive the utmost coöperation of their District Councilor and the Secretary of the State Society. It may be that these latter officers can be of great assistance in developing a program and in obtaining the coöperation of the entire group of societies comprising the Councilor District.

HONOR ROLL FOR 1927

Never in the history of the Society has so large a proportion of our members assured their continued good standing by prompt payment of their dues for the current year. The improvement for a number of years has been gradual, and is almost entirely due to the energy and determination of the various county society secretaries. Twenty-five of our sixty-three component societies qualified for the 1927 Honor Roll, having collected and remitted on or before March 31st the 1927 dues of all their members.

Compared with 1926 and expressed in percentages, the standing of the various societies on April 22d was as follows:

	1927	*1926*
Berks	100%	100%
Center	100%	100%
Clarion	100%	100%
Clinton	100%	100%
Greene	100%	100%
Lehigh	100%	100%
McKean	100%	100%
Mercer	100%	100%
Monroe	100%	100%
Montgomery	100%	100%
Montour	100%	100%
Somerset	100%	100%
Sullivan	100%	100%
Union	100%	100%
Wyoming	100%	100%
York	100%	100%
Lebanon	100%	97%
Lycoming	100%	98%
Crawford	100%	97%
Columbia	100%	96%
Lancaster	100%	97%
Northumberland	100%	95%
Beaver	100%	95%
Cumberland	100%	94%

	1927	1926
Chester	100%	91%
Juniata	100%	91%
Bedford	100%	82%
Clearfield	99%	100%
Venango	99%	100%
Butler	99%	98%
Cambria	99%	96%
Lawrence	99%	91%
Westmoreland	98%	100%
Dauphin	98%	98%
Delaware	98%	98%
Armstrong	98%	97%
Schuylkill	98%	97%
Franklin	98%	96%
Jefferson	98%	94%
Fayette	98%	90%
Washington	98%	89%
Erie	98%	83%
Huntingdon	97%	100%
Lackawanna	97%	84%
Allegheny	97%	....
Adams	96%	100%
Elk	96%	100%
Mifflin	96%	100%
Susquehanna	95%	100%
Perry	94%	100%
Luzerne	94%	97%
Northampton	94%	95%
Warren	93%	100%
Tioga	93%	97%
Potter	93%	97%
Bucks	92%	100%
Bradford	92%	94%
Philadelphia	90%	....
Indiana	91%	100%
Wayne	90%	90%
Carbon	90%	97%
Blair	90%	88%
Snyder	85%	66%

Members paid April 22, 1923, 6,970; same date, 1924, 7,026; same date, 1925, 7,018; same date, 1926, 7,206; same date, 1927, 7,363.

The Medical Society of the State of Pennsylvania is but one of several medical organizations which has sustained an irreparable loss in the death of Dr. Carey J. Vaux of Pittsburgh. Dr. Vaux served for many years in our House of Delegates, and as Chairman of the Reference Committee on Reports of Officers and Committees of the 1926 House, submitted a report which will for years to come serve as an ideal review. At the time of his death, Dr. Vaux was Chairman of a special committee to report to the 1927 House of Delegates on the open-closed hospital situation. We quote the following from the April 23d issue of the *Pittsburgh Medical Bulletin:*

Carey Judson Vaux, physician, soldier, executive, who rose to great heights in a newly chosen field, has passed on. Ever noted for his intensity of purpose and for devotion to the right, he surmounted the obstacles of human existence through direct and fearless attack. He rose from a Lieutenant to a Colonel in the United States Army through sheer merit, always giving evidence of a courage which no circumstance could subdue.

He has done for Pittsburgh a wonderful thing in establishing a Health Department second to none and with an excellent *esprit de corps.* During his short five-year tenure of office, Pittsburgh has become a byword among public health officials, and we owe this to Vaux, the courageous-efficient executive.

As Secretary, President, and Director of the Allegheny County Medical Society, he was for nearly two decades a dominant factor. His clear vision and practical mind has been one of our most valuable assets. His unfailing interest in organized medicine and his constant understanding of this Society as a civic organization have been of the highest worth in the deliberations of the executive body of the Society.

His career is a splendid lesson, and he has left us a monument to his zeal and energy—the Department of Health of the City of Pittsburgh.

ITEMS OF INTEREST

Guests of the Washington County Medical Society at its April meeting were given an opportunity to greet as visitors to the Society a score or more of premedical students from Washington and Jefferson College. This unique effort on the part of the Washington County Society to serve these young men in the capacity of preceptor is worthy of emulation by other county medical societies which may not have previously recognized their opportunity.

Many visiting physicians took advantage of the privilege of visiting the recently completed Washington General Hospital. This institution, with a capacity of one hundred and fifty beds, ideally situated on one of the many hills of Washington, is equipped to the *nth* degree to minister to the relief and supply the creature comforts of sick or convalescent patients. The "just-nowness" of its laboratory, medical, surgical, and dietary equipment, and the luxury of its other furnishings are a challenge to the best efforts alike of the physicians and the citizens of Washington to give liberally of their skill and support in order that this institution may render service proportionate to the highest hopes of its founders.

President Albertson and President-Elect Morgan attended and took part in the program of the sixty-second annual meeting of the Allegheny County Medical Society, held April 12th at the Hotel Schenley, Pittsburgh. In expressing their enjoyment of the evening's entertainment, both gentlemen declared that the perfectly coördinated meeting, election, dinner, and program, which had its climax in the address delivered by Captain Irving O'Hay, gave great promise for the success of the entertainment features in connection with the 1927 meeting of the State Society in Pittsburgh. Dr. Robert L. Anderson, Chairman of the Committee on Arrangements for our 1927 meeting, planned in every detail the affair above referred to, which was attended by 425 members and guests of the Allegheny County Medical Society.

CHANGES IN MEMBERSHIP OF COUNTY SOCIETIES

The following changes have been reported to April 14:

ALLEGHENY: *New Members*—J. Stanley Anderson, 22 B St., Universal; Arthur M. Cohen, 55 Miller Ave., Clairton; John J. Donaghue, 310 Shaw Ave., McKeesport; Samuel B. Goodstone, 5739 Darlington Road, Rutherford T. Johnstone, 6625 Church Ave., Ben Avon, Thad. A. Starzynski, 2801 Penn Ave., George E. Martin, Tuberculosis League Hospital, Bedford Ave., Joseph Loughrey, Highland Bldg., John B. Keaggy, 64 Riverview Ave., N. S., Alex. F. O'Hare, 121 University Place; Henry M. Snitzer, 3619 Forbes St., Pittsburgh. *Transfer*—Thomas L. McCullough, 5416 Hampton St., Pittsburgh, from Washington County Society. *Removal*—Carlton H. Davidson, from Pittsburgh to Carmichaels.

ARMSTRONG: *New Member*—Leland T. Henry, Apollo.

BEDFORD: *New Member*—James W. Lindsey, Imler. *Transfer*—Howard L. Dovey, Everett, from Huntingdon County Society.

BERKS: *New Member*—Cyrus B. Zimmerman, Intervilla.

BLAIR: *New Members*—E. W. Stitzel, Williams Block, Hollidaysburg; William R. Brewer, 703 Sixth Ave., Altoona; R. V. Silknetter, 1202 Seventh Ave., Altoona. *Transfer*—G. W. Krumbine, Ashville, from Cambria County Society.

BUCKS: *New Member*—Harvard R. Hicks, Doylestown.

CAMBRIA: *Death*—Sylvester C. Gearhart, Blandburg (Jeff. Med. Coll., '95), March 19, aged 59.

COLUMBIA: *Resignation*—Ruth Tustin, Bloomsburg.

DAUPHIN: *Removal*—William R. Rothe, from Harrisburg to 13 Trinity Place, Williamsport (Lycoming Co.). *Death*—James E. T. Oxley, Harrisburg, March 13, aged 43.

ERIE: *Reinstated Member*—Clarence W. Hotchkiss, Wesleyville. *Death*—Ira J. Dunn, Erie (Univ. of Penna., '91), March 8, aged 64.

LEBANON: *New Member*—George E. Flanigan, Richland. *Resignation*—Joseph Crowley, Camden, N. J.

LACKAWANNA: *New Members*—M. A. Kline, Dalton; Emil F. Gombar, 1018 Main St., Dickson City; S. S. Watson, Moosic; O. G. Leopardi, 540 Main St., Peckville; R. R. Schultz, Scranton Hospital, G. L. Neuman, Connell Bldg., M. J. Stec, 220 No. Main Ave., E. W. Whalen, 815 Hickory St., W. J. Finnerty, 518 Brook St., P. H. Walker, 515 Luzerne St., E. P. Larkin, Bliss Bldg., R. V. White, Brooks Bldg., J. H. O'Dea, 1429 No. Washington Ave., Scranton. *Reinstated Member*—Patrick J. Heston, 213 Pittston Ave., Scranton. *Deaths*—Isaac Goodman, Scranton (Jeff. Med. Coll., '93), March 10, aged 63; Samuel H. Vorhees, Peckville (Univ. of Md., '89), aged 62.

LUZERNE: *New Members*—E. J. Kielar, 7 E. Main St., Glen Lyon; Thomas R. Dorris, 41 W. Broad St., Nanticoke. *Removal*—Martin H. Collier, from White Haven to Grenloch, N. J. *Resignation*—Constantine A. O'Britis, Chicago, Ill.

LYCOMING: *Removal*—Rush E. Castelow, from Williamsport to Kansas City, Mo.

MONTOUR: *Transfer*—Allen V. Carl, Danville, from Columbia County Society. *Death*—Benjamin E. Bitler, Potts Grove (Louisville Med. Coll., '89), March 27, aged 65.

NORTHAMPTON: *New Member*—David F. Bachman, 16 W. Fourth St., Bethlehem. *Death*—Isadore E. Freed, Bethlehem (Univ. of Pitts., '09), March 15, aged 43.

PERRY: *Removal*—Frank Patterson, from Huntingdon to Tyrone (Blair Co.).

PHILADELPHIA: *New Members*—Herman Brown, 2201 N. 33d St., Jacob Gershon-Cohen, Mt. Pleasant Ave. and Cresheim Road, Capers B. Owings, 6006 Green St., Gtn., George A. Richardson, 1532 Overington St., Edward D. Atlee, 2202 Pine St., Charles J. Haines, 2878 S. 15th St., James P. Lewis, 3803 Chestnut St., Herman B. Slotkin, 1806 Champlost Ave., Edmund B. Spaeth, 20th and Chestnut Sts., Herschel C. Walker, Medical Arts Bldg., Henry J. Tumen, 259 So. 54th St., William P. Brown, 311 S. Juniper St., Philadelphia. *Transfer*—Jacob H. Vastine, 142 Montgomery Ave., Cynwyd, from Columbia County Society. *Deaths*—Charles W. Saalfrank, Philadelphia (Jeff. Med. Coll., '86), March 5, aged 66; Harry H. Freund, Philadelphia (Jeff. Med. Coll., '80), March 26, aged 70. *Resignations*—Charles P. Noble, Radnor; Monroe D. Reese, Lebanon; Mary J. Rochelle, Lewis C. Wessels, M. R. Smoczynski, John L. Donahue, W. Wallace Fritz, Philadelphia; W. A. Jolley, Little Rock, Ark.; Karl Schaffle, Asheville, N. C.

SCHUYLKILL: *New Member*—Neal Dever, Delano. *Resignations*—William J. Monaghan, Secaucus, N. J.; Willard G. Mengel, Camden, N. J.

SOMERSET: *Removal*—Albert L. Keim, from Jerome to 113 W. Washington St., Hagerstown, Md.

VENANGO: *New Member*—Harvey M. Watkins, Polk. *Resignations*—Robert W. Clark, Venango; Guy L. Alexander, Washington, D. C.

WASHINGTON: *Removal*—John J. McCarthy, from Avella to 130 Chesterfield Road, Pittsburgh (Alleg. Co.).

WAYNE: *New Members*—Clark B. Holbrook, Asa L. Hickok, Waymart.

PAYMENT OF PER-CAPITA ASSESSMENT

The following payment of per-capita assessment has been received since March 19th. Figures in first column indicate county society numbers; second column, State Society numbers.

Mar. 21	Erie		5703-5732	$150.00
	Luzerne	181-200	5733-5752	100.00
	Perry	13-14	5753-5754	10.00
	Delaware	100	5755	5.00
	Chester	71-72	5756-5757	10.00
	Lebanon	19-20, 22-27	5758-5765	40.00
	Fayette	100-106	5766-5772	35.00
	Venango	13-14	5773-5774	10.00
	Berks	126-129	5775-5778	20.00
	Mercer	65	5779	5.00
	Bradford	26-30	5780-5784	25.00
	Warren	1-42	5785-5826	210.00
	Dauphin	139-142	5827-5830	20.00
	Lawrence	59-63	5831-5835	25.00
	Carbon	17-24	5836-5843	40.00
	Northampton	89-105	5844-5860	85.00
23	Schuylkill	141-147	5861-5867	35.00
	Huntingdon	33	5868	5.00
	Cumberland	33	5869	5.00
	Lackawanna	174-190	5870-5886	85.00
	Lancaster	131-142	5887-5898	60.00
	Blair	61-80	5899-5918	100.00
	Wayne	19-21	5919-5921	15.00
	Westmoreland	95-101	5922-5928	35.00
	Bedford	15	5929	5.00
	Crawford	38-40	5930-5932	15.00
	Mercer	66-68	5933-5935	15.00
	Tioga	23-24	5936-5937	10.00
	Center	24	5938	5.00
	Delaware	101	5939	5.00
	Armstrong	33-39	5940-5946	35.00
	Venango	15-21	5947-5953	35.00
25	Susquehanna	16-17	5954-5955	10.00
	Venango	22-26	5956-5960	25.00
	Armstrong	40-41	5961-5962	10.00
	Philadelphia	1448-1650	5963-6165	1,015.00
	Beaver	43-63	6166-6186	105.00
26	Mercer	69	6187	5.00
	Cambria	142-150	6188-6196	45.00
	Butler	45-48	6197-6200	20.00
	Venango	27-35	6201-6209	45.00
	Schuylkill	148-150	6210-6212	15.00
	Columbia	30	6213	5.00

Mar. 26	Somerset	43	6214	$5.00
	Washington	110-117	6215-6222	40.00
28	Clearfield	50-52	6223-6225	15.00
	Luzerne	201-223	6226-6248	115.00
	Venango	36-44	6249-6257	45.00
	Montour	26	6258	5.00
	Beaver	64-74	6259-6269	55.00
	Northampton	106-118	6270-6282	65.00
	Fayette	107-115	6283-6291	45.00
	Crawford	41-43	6292-6294	15.00
	Dauphin	143-150	6295-6302	40.00
	Blair	81-93	6303-6315	65.00
	Lycoming	102-105	6316-6319	20.00
	Cambria	155-159	6320-6324	25.00
	Westmoreland	102-112	6325-6335	55.00
	Armstrong	42-50	6336-6344	45.00
	Clinton	16-22	6345-6351	35.00
	Columbia	31	6352	5.00
	Berks	130-135	6353-6358	30.00
	Bedford	16	6359	5.00
	Franklin	53	6360	5.00
	Snyder	1-3	6361-6363	15.00
	Butler	49-55	6364-6370	35.00
	Cumberland	34	6371	5.00
	Clearfield	53-56	6372-6375	20.00
	Perry	15	6376	5.00
	Cambria	151-154	6377-6380	20.00
	Venango	45-46	6381-6382	10.00
	Jefferson	35-43	6383-6391	45.00
	Tioga	25	6392	5.00
	Washington	118	6393	5.00
31	Adams	26	6394	5.00
	Lackawanna	191-220	6395-6424	150.00
	Bradford	31-35	6425-6429	25.00
	Tioga	26-27	6430-6431	10.00
	Dauphin	151-154	6432-6435	20.00
	Washington	119-130	6436-6447	60.00
	Venango	47	6448	5.00
	Schuylkill	151-153	6449-6451	15.00
	Snyder	4	6452	5.00
	Northumberland	54-60	6453-6459	35.00
	Indiana	33-50	6460-6477	90.00
	Columbia	32-33	6478-6479	10.00
	Northampton	119-126	6480-6487	40.00
	York	114-126	6488-6500	65.00
	Lebanon	29-35	6501-6507	35.00
	Potter	13	6508	5.00
	Lawrence	65	6509	5.00
	Mifflin	25	6510	5.00
	Crawford	44-46	6511-6513	15.00
	Delaware	102-106	6514-6518	25.00
	Cumberland	35	6519	5.00
	Huntingdon	34	6520	5.00
	Schuylkill	154	6521	5.00
	Perry	16	6522	5.00
	Armstrong	51-52	6523-6524	10.00
	Luzerne	224-262	6525-6563	195.00
	Mercer	70-71	6564-6565	10.00
	Clearfield	57-63	6566-6572	35.00
	Lycoming	106-110	6573-6577	25.00
	Fayette	116-118	6578-6580	15.00
	Chester	73	6581	5.00
	Beaver	75-78	6582-6585	20.00
	Bedford	17	6586	5.00
	Bucks	58-63	6587-6592	30.00
	Dauphin	155-157	6593-6595	15.00
	Somerset	44	6596	5.00
	Venango	48	6597	5.00
	Indiana	51-52	6598-6599	10.00
	Northumberland	61-64	6600-6603	20.00
	Delaware	107-109	6604-6606	15.00
	Northampton	127-128	6607-6608	10.00
	Erie	111-114, 116-141	6609-6638	150.00
	Lancaster	143	6639	5.00
	Washington	131-133	6640-6642	15.00
	Lackawanna	221-222	6643-6644	10.00
	Delaware	110	6645	5.00
	Allegheny	951-1247	6646-6942	1,485.00
	Philadelphia	1651-1932	6943-7224	1,410.00
April 4	Somerset	45-46	7225-7226	$10.00
	Armstrong	53	7227	5.00
	Carbon	25	7228	5.00
	Westmoreland	113-149	7229-7265	185.00
	Lehigh	88-113	7266-7291	130.00
	Schuylkill	155	7292	5.00
	Northampton	129	7293	5.00
	Luzerne	263-266	7294-7297	20.00
	Lackawanna	223	7298	5.00
	Beaver	79-81	7299-7301	15.00
	Snyder	5-6	7302-7303	10.00
6	Dauphin	158	7304	5.00
	Lawrence	51	7305	5.00
7	Cumberland	36	7306	5.00
	Wayne	22-28	7307-7313	35.00
	Huntingdon	35	7314	5.00
	Luzerne	267-271	7315-7319	25.00
	Venango	49	7320	5.00
	Jefferson	44-49	7321-7326	30.00
8	Luzerne	272	7327	5.00
9	Northampton	130-131	7328-7329	10.00
	Luzerne	273	7330	5.00
	Venango	50	7331	5.00
	Dauphin	59	7332	5.00
11	Lawrence	64-66	7333-7334	10.00
12	Mifflin	26	7335	5.00
14	Lackawanna	224	7336	5.00
	Luzerne	274	7337	5.00
	Beaver	82-83	7338-7339	10.00

COMMITTEE ON SCIENTIFIC WORK

THOMAS G. SIMONTON, M.D., *Chairman*
Pittsburgh, Pa.

PROGRAM OF THE SURGICAL SECTION

The program of the Surgical Section will conform to the symposium type. Each subject will be allotted a fifty-five minute period, to be divided among the principal and associate speakers, allowing some time for general discussion.

The following subjects have been selected:

Surgery of the Spleen—Dr. George P. Muller, Philadelphia, principal.

Traumatic Surgery—Dr. C. Loyal Shoudy, Bethlehem, principal.

Orthopedic Deformities of Early Childhood—Dr. DeForest P. Willard, Philadelphia, principal.

Carcinoma of the Breast—Dr. Jonathan M. Wainwright, Scranton, will show a series of slides of the complete breast. This will be a valuable contribution to the study of breast cancer.

Carcinoma of the Rectum—Dr. Damon B. Pfeiffer, Philadelphia.

Recognition and Treatment of the Poor Surgical Risk—A subject of vital importance to every one doing surgery. Dr. John H. Jopson will lead this discussion.

A period will also be given to five-minute case reports.

There will be three guest speakers. During the Tuesday afternoon session, Dr. Jabez Jackson, of Kansas City, president of the American

Medical Association, will address the Section. Dr. Donald Balfour, of Rochester, Minn., and Dr. Frank Lahey, of Boston, will be the guests at the Wednesday and Thursday sessions. Dr. Balfour's subject will be *Gastric Ulcer, Dr.* Lahey's *Gastrojejunal Ulcer.*

COMMISSION ON COMPENSATION LAWS

Lever F. Stewart, *Chairman*
Clearfield, Pa.

FINAL RESULTS IN COMPENSATION LEGISLATION

The 1927 session of the Pennsylvania State Legislature closed without passing one of the various bills offered by the physicians of the State for improvement in the Compensation Law.

It is our understanding that all of these measures were killed at the instigation of the Grundy interests, the Self-Insurer's League, and the ruling element of the Republican Party of the State.

This opposition is overwhelming. It is surprising that the physicians of the State should find themselves without the friendship of the politicians or the manufacturing interests of the State. In the light of this intelligence, it should not be surprising if these antagonists of the doctor should find themselves without the friendship of the doctor. The manufacturer especially, does well to command the doctor's respect for fairness. This question frequently concerns the manufacturer.

Senator H. B. Scott, of Philipsburg, graciously accepted the task of presenting an eleventh-hour bill. He succeeded in having it passed by the Senate and was able to have it go through a second reading in the House before it was buried in a committee. The doctors of the State of Pennsylvania are indebted to Senator Scott for his loyalty to them and his great efforts to have this bill passed. With the opposition to the bill, it is truly remarkable that it was possible to have it go as far as it did.

At a later date the Compensation Commission will make an effort to give a brief history of its efforts to obtain a change in the Compensation Law, and will follow this by some suggestions for procedure at the next session of our Legislature.

The influence of iodin on the surgical treatment of exophthalmic goiter is shown by the following clearly proved facts: the convalescent period definitely has been shortened; the necessity for multiple operations greatly has been decreased; the limits of operability have been widened; and the mortality further has been reduced.—*Pemberton.*

County Society Reports

BLAIR—MARCH

The March meeting was held in the Altoona Hospital, March 22d. Dr. William P. Brown, Medical Secretary of the Pennsylvania Tuberculosis Society, was the guest of honor.

Dr. Brown spoke of the marked reduction in the death rate from tuberculosis in the past five years, but stated that a large number of patients still remain, many of whom have never presented themselves for medical examination or treatment. He emphasized the necessity of the physician making the patient realize the seriousness of his condition, the danger to others, and above all, the necessity for prolonged rest. In conclusion, he stated that tuberculosis is still the leading cause of death in individuals between the ages of fifteen and forty-five, and urged that more careful study be given all suspicious cases.

R. V. Silknetter, M.D., Reporter.

JEFFERSON—MARCH

The Society met in the parlors of the Borens Hotel at Reynoldsville, March 10th, with Dr. S. M. Beyer, president, presiding. Addresses were made by Dr. L. W. Zimmerman upon "Neoplasms of the Liver," and by Dr. F. C. Smathers upon "Diseases of the Liver and Gall Bladder from the X-Ray Standpoint." Following the presentation of these papers there was a "live-wire" discussion by all the members present.

W. E. Dodd, M.D., Chairman, Program Committee.

LEBANON—MARCH

At the regular monthly meeting on March 8th, Dr. H. B. Wilmer, of Philadelphia, addressed the Society on "The Use of Allergins." He stressed the point that while allergins are of very certain benefit, to use them properly, a thorough study of the case in hand must be made, or the chances are that the results will be disappointing.

The Physicians' Protective Society went on record as commending Senator W. C. Freeman on his stand in the matter of the Senate Bill No. 933.

There was a meeting of protest held in Lebanon by the chiropractors and their misguided friends on the afternoon of April 3d. It consisted mostly of abuse of the medical profession and condemnation of Senator Freeman and his committee because they did not report bill 933 out of the committee.

John D. Boger, M.D., Reporter.

LUZERNE—MARCH

Stanley Freeman, M.D.: Postoperative Embolism.—The most constant symptom of embolus is pain. This occurs suddenly, is sharp in character, and may or may not be accompanied by a chill. The presence of an embolus is known only by the disturbance it causes. The organs involved, in order of frequency, are the lung, kidney, spleen, and brain, with less frequently the iliac, femoral, hepatic, mesenteric, and coronary arteries. The frequency of pyelitis following operation may be due to infected emboli. In a series of 5,710 cases from ten different clinics, there were postoperative pulmonary complications in 5.3 per cent. Hampton and Wharton (Johns Hopkins) state that most postoperative pulmonary complications are due to emboli. Fatal pulmonary embolism usually occurs in the first week after operation. The lungs show edema and con-

gestion. There is usually sharp, severe, sudden pain, with dyspnea, chills, blood-tinged expectoration, and shock. Emboli are caused by enfeebled circulation, by dilated veins in the pelvis and extremities, by venous stasis, by lowered blood volume, by myocardial insufficiency, and by infection.

CASE 1. A boy 6 years old died of pulmonary embolism the morning following operation for acute appendicitis. The operation had consumed only twelve minutes.

CASE 2. A man, 53 years old, was operated upon for cure of an inguinal hernia. The operation consumed twenty-seven minutes. On the sixteenth day, accompanying the exertion of getting out of bed, he had pulmonary embolism. He was kept in bed two weeks longer, when he developed thrombosis of the left femoral vein.

CASE 3. A woman, aged 20, was operated upon for acute appendicitis, the operation consuming thirty minutes. The patient died suddenly of cerebral embolism, as she was leaving the hospital.

CASE 4. A man, aged 35, was operated on for perforated duodenal ulcer, the operation consuming forty-five minutes. On the twelfth day after operation, the patient died suddenly from embolism of the pulmonary artery or coronary artery.

F. T. O'Donnell, M.D.: Pyloric Stenosis and Spasm.—The differential diagnosis between pyloric stenosis and spasm in infants is important as it determines life or death in the patient. Stenosis usually begins two to four weeks after birth, whereas spasm usually begins in the second month. The vomiting of stenosis is characteristically explosive or projectile, and there is no intermission. In spasm the vomitus may simply roll out or be projectile, and instead of being persistent and progressive, it is very irregular. In stenosis there is constipation. In spasm the stools vary: they may be normal, slightly constipated, or approach the starvation stool, especially after several spasms of vomiting coming close together. In stenosis there is rapid loss of weight; in spasm the loss is for only a short period and is regained during an intermission. In stenosis the urine is scanty; in spasm, it is normal.

In stenosis there is emaciation and dehydration. The upper part of the abdomen is full, tense, and bulging, with a palpable, movable tumor in the region of the pylorus which is smooth and olive-shaped. Fluoroscopic examination with an opaque meal shows retention in the stomach, with only a slight leakage through the pylorus after several hours. In spasm, after several hours, the stomach is usually found empty or nearly so.

The treatment of stenosis is operative. No similar obstruction at any other site in the gastro-intestinal tract in the adult or child would be treated by any other than surgical means. Only when definite food stools are present, vomiting is minimal, and the weight of the child is slowly increasing, may operation be delayed. It is the child whose condition is recognized early and immediately relieved who passes through a rapid and easy convalescence. The operation of choice is the Fredet-Rammstedt. After operation these infants can take food within three hours, and it should be repeated frequently in small amounts.

Medical treatment should be given in cases of stenosis only when selected because of incomplete obstruction. It consists of the administration of atropin to the limit of physiologic effect, with feeding of concentrated foods. Thick-cereal feeding has been beneficial.

Dr. Gibby: I had one case in which the diagnosis was made late and the patient went a long time until the condition was very bad, the patient being dehydrated and toxic when the operation was performed. We had the olive-shaped tumor, and the Fredet-Rammstedt operation was done. The operation consumed only ten minutes, but the patient died.

In the second case the diagnosis was made early. It came to operation comparatively early with nearly complete obstruction. The olive-shaped tumor could be felt previous to operation. Recovery resulted. The incision is a delicate matter, because if it is not made far enough over toward the duodenum, the operator will not get all the fibers, and if too far, he will open the mucous membrane. Some surgeons stress the assertion that the operation should not be performed unless the olive-shaped tumor can be felt. However, if other symptoms are present, I feel that it is unwise to wait until the patient is so bad he cannot stand the operation.

Dr. Dattner: It is not always an easy matter to tell whether one is dealing with spasm or stenosis. Taking all conditions into consideration, the difference of time does not hold good. I have seen a spasm starting at two weeks with all the persistence of stenosis. The thing to consider, disregarding the tumor, is the loss of weight. At Finkelstein's Clinic in Germany, three or four cases that were definitely stenosis, with palpable tumor and loss of weight, showed marked improvement and went along without operation on adrenalin (1:1,000) given intracutaneously. Finkelstein could not explain why the adrenalin did good, but thought it had something to do with metabolism.

I saw many operations in Vienna without one cure. The results were very poor. Patients should be studied carefully and all water taken away from them by mouth and given subcutaneously or intravenously. They should be given a thick formula.

Dr. Ashley: Emboli add to the embarrassment of a man doing fracture work. I can recall three cases on my service. One patient had a fractured wrist, and shortly after I released the dressings he died suddenly with pressure in the chest. Another had a fractured femur. A third patient with hernia died in the same way on the first movement out of bed.

Dr. Mengel: A great many of our sudden deaths a few days or a week after operation, and attributed to other causes, are really due to emboli. A great many of the cardiac conditions called "angina" are really embolic. In these cases of angina where there is a rapid fall of blood pressure and slight rise of temperature following perhaps for several weeks or months a myocardial condition, you can make up your mind you have to deal with emboli.

Dr. Mayock: The last question raised by Dr. Mengel is on my mind. I should ask if the Wassermann had been taken in these cases. Many might be syphilitic. One Wassermann means nothing. Several, including provocative tests, should be made to rule out syphilis as an etiologic factor in some cases of emboli.

Dr. Long: Dr. Mayock is right. The fact that the Wassermann is negative means nothing. In these cases I think that we have something to provoke the catastrophe. Dr. Freeman suggested the heart, Dr. Mayock the endarteritis, Dr. Mengel the angina. I think in most of these cases where there have been thrombi and emboli, the chances are that if we could get a real history we should always find an underlying provocative cause, and if the injury had not happened then, it would have at some other time.

LEWIS T. BUCKMAN, M.D., Reporter.

PHILADELPHIA

March 9, 1927

Dr. James C. Small: The Etiology and Specific Treatment of Rheumatic Fever.—The transient acute arthritis which occurs in rheumatic fever is insignificant when compared with the deeper lesions affecting the heart. Acute arthritis in rheumatic fever is much the same as the skin lesions of syphilis—a fortunate evidence in cases of doubtful diagnosis, but evanescent, while lesions in vital structures become essentially chronic. Rheumatic fever has long been regarded as infectious, with well-known prodromes—exposure to cold, damp, or chilling. The attacks are preceded by upper-respiratory infection and are initiated by the same causes. The virus is one of a low-grade virulence and is widespread in origin. It is an opportunist, finding a favorable host in one of lowered resistance. The frequency with which patients with rheumatic fever have had tonsillitis has caused us to think of the streptococcus as possibly etiologic, and of the upper respiratory tract as the first localization of the virus in the host. Blood cultures in rheumatic-fever patients and in patients with endocardial lesions of rheumatic fever have many times yielded streptococci, but no dominant strain has been found, and since "streptococci" is but a group name, a dominant strain is essential. In scarlet fever and in erysipelas specific strains have already been isolated. From a clinical standpoint there is a confusion in differentiating rheumatic fever from bacterial endocarditis, especially when the latter condition arises from a secondary invasion on a rheumatic endocarditis. The transition stages are difficult to identify.

Recently the author has described a streptococcus which occurs in rheumatic fever and can be differentiated from the group of streptococci by specific agglutinations. It has been isolated from the blood, throat, and feces in cases of acute rheumatic fever, chorea, and chronic arthritis. It produces no change in the blood agar medium, though heretofore a nonhemolytic organism was associated with avirulence. This *Streptococcus cardioarthritidis* is found constantly in the throats of rheumatic-fever patients, and since it produces antigenic response in animals, a therapeutic serum may be made. Inoculated into animals it produces characteristic lesions of the nerves, heart muscle, and joints; grown in the test tube, it is constant in reaction. It lodges on the surface of the mucous membrane rather than in the tonsillar crypts. The organism has been used in the production of an antiserum in horses, and favorable results obtained in patients after its use appear to favor the view that a toxemia produces the clinical symptoms of the disease. While endothelial structures seem susceptible to this particular poison, this does not preclude the view that deep infection of the respiratory tract may occur through extension, resulting in a pleurisy or pericarditis.

Fifty-three patients have so far been treated with this serum, twenty-four suffering with acute rheumatic fever (the others having chorea, chronic arthritis, or cardiac disease of rheumatic origin). In the acute-rheumatic-fever patients a detoxifying response was uniformly manifested by prompt relief of arthritic symptoms and by the return of the joint to normal appearance and function. While the result might be due either to a specific or a nonspecific effect, the writer believes it to be a specific reaction. He believes that in the serum we have a practical therapeutic agent, the use of which is followed by uniformly beneficial results. More data, of course, are necessary. The detoxifying response takes place in three stages, which will be mentioned later. The Streptococcus cardioarthritidis was demonstrated on blood agar and differentiated from its related strains, which also appeared on the medium—Streptococcus viridans, Streptococcus hemolyticus, and Micrococcus catarrhalis. It grows in short chains, diplo forms, and masses. It presents a constancy of fermentive reactions.

Slides pictured lesions produced by injection of the Streptococcus cardioarthritidis into rabbits—arthritis and heart lesions with Aschoff bodies. Temperature charts of cases followed.

One patient with a recurrent attack, with pancarditis and multiple joint involvement, and a temperature of 101°, was given 30 c.c. of serum with no response. A similar injection was given next day, with improvement in the joints but exaggerated precordial pain. The temperature and pulse were not affected, but were lowered after a third injection, although a severe serum sickness with urticaria ensued. In five days the temperature was normal. This illustrates the first stage of detoxifying these cases—when the joints alone are affected. The patient had a recurrence of the arthritic symptoms three weeks later.

A second patient, a girl 12 years of age, in the seventh week of the disease, with only the residual effects of the arthritis, but with a double mitral murmur and peri- and endocardial involvement, was given 50 c.c. intramuscularly. She was very quickly relieved of an arthritis of the cervical vertebræ and torticollis. Her temperature was but little affected. She developed urticaria and serum sickness, and the temperature dropped to normal. The white blood corpuscles numbered 7,300. This illustrates the second stage of detoxifying—relief of arthritic symptoms and normal temperature. The effect on the pulse was not marked.

Another patient, a girl 16 years old, was admitted the third day of rheumatic fever. She gave a history of sore throat. Fifty c.c. of serum was administered. The temperature remained high, the pulse irregular, but the pain was relieved. Fifty c.c. more afforded prompt relief of pain and swelling, and temperature and pulse fell to normal. This demonstrates the third stage of detoxifying. In a consideration of the pulse, the mechanical damage to the heart must be taken into account.

A case was cited to serve as a sort of control. A young married woman, admitted the fourth day of an attack of arthritis, was given serum twice with no effect. On further study she was found to have a positive gonococcus fixation, a purulent vaginitis, and destruction of the cartilage of the hip joint.

Summary: Rheumatic fever is not terminated with the disappearance of joint symptoms, but is a chronic disease of the heart. A new species of streptococcus has been described which is found in the throats of all rheumatic-fever patients, and has been isolated from the blood culture of two patients. Since the use of serum produces detoxifying effects, the disease seems to be a toxemia rather than a bacteremia. In detoxifying, sufficient serum must be given to affect the deep-seated symptoms, evidenced by improvement of the heart action, decline of temperature, and decrease in pulse rate. If it shall be proved that the serum is a specific antitoxin, the principles of its application to this disease with its deep-seated chronic manifestations are to be considered. The passive immunity lasts three to four weeks. If the lesion is such that it will not heal in that time, recurrence is likely. Since, after the first injection of horse serum the patient is sensitized, making this form of therapy again impossible, it may

be necessary to make a bovine serum for a second injection. Also, since the serum is antigenic, it might be well to employ at the same time a vaccine for the production of active immunity to insure more certain permanence of the cure and to prevent relapse.

Dr. John A. Kolmer.—In discussing the etiology and and treatment of acute rheumatic fever, we must grant at the outset its infectious nature, and, because of its effect upon the heart, its importance. It has long been conceded that a coccus is the causative organism. All students of the subject, however, have doubted that it is the streptococcus alone that is to blame, since the organism could be found in only 10 per cent of blood cultures and in only 50 per cent of cultures from the heart. However, it was not until the cultures had been kept for nine days or much longer that Dr. Small found his organism in many cases, and the negative results of previous investigators may have been due to errors in technic.

Can we regard the Streptococcus cardioarthritidis as specific? While its injection has produced arthritis in rabbits, it must be remembered that the joints of this animal are especially susceptible to arthritis, and will be so affected by other streptococci also. Real proof of the specificity of Dr. Small's organism can be had only by experimentation on the human. It would seem reasonable to allow criminals condemned to die to make some retribution to the humanity they have wronged by giving them the choice of commutation of sentence to life imprisonment if they would submit themselves to such experimentation.

If it be true that an antibody is developed in the blood of the patient for the organism alleged to be the cause of the disease, there should be in the serum of the patient an agglutinin or a complement-fixing body, or more important, an opsonin. Has the blood of the patient with rheumatic fever an antitoxin? Can it specifically neutralize the toxin of the organism? Can the organism give a skin reaction as an indication of a natural immunity? Though many claim that the clinical features of rheumatic fever indicate a toxemia (chorea resembling the irritation of toxin that occurs in meningitis), it would hardly appear that the organism lodges in the tonsils, and only the toxin is transported. It is more likely that the organism itself is transported to the lesions and there produces its toxins.

We must keep an open mind as to the specificity of the organism. The serum treatment of rheumatic fever is not new to the profession, for Menzer, twenty-five years ago, produced a serum from streptococci obtained from the throats of patients, and reported beneficial results, which results were ascribed, however, more to the nonspecific protein reaction. Polyvalent streptococcic serum and the serum of scarlet fever are alleged to yield beneficial results. In view of the fact that the injections given by Dr. Small were intramuscular, however, his prompt results were more likely due to a specific effect. Protein-shock therapy is helpful in all kinds of arthritis. So it would seem that there still remains an open question as to the exact relation of this organism to rheumatic fever and the effects of the serum, though in the work of Dr. Small a distinct advance has been made.

Dr. Marcus A. Rothschild: The Myocardial Lesions of Acute Rheumatic Fever and Subacute Bacterial Endocarditis, and Their Practical Significance.—The virus of rheumatic fever produces an exudate into the serous membranes and a proliferation of cells—the Aschoff nodules. Clinically, there is, during the first two weeks of a rheumatic fever, a cardiac dilatation and hypertrophy independent of any valvular disease, at times producing a mitral murmur by dilatation of the mitral ring. A mitral stenosis with an enlarged left ventricle is due to rheumatic myocarditis oftener than to any other cause. The virus may affect the myocardium solely. The heart rhythm is frequently disturbed, with a resulting heart block, auricular fibrillation, or sino-auricular block, often recognized clinically, but when in minor degree, frequently requiring an electrocardiogram for detection.

Sixty-five cases of acute rheumatic fever were studied, twenty-nine in their first attack. Thirty-four had an endocarditis; thirty-one had had previous rheumatic infection. There was partial heart block in twenty-three, dropped beats in five, and 86 per cent of the group showed an increase of the P-R interval in the electrocardiogram. The heart was affected in all but four of the group. It was affected more often than the joints, and in cases was the only manifestation.

The changes brought about in the heart are specific for acute rheumatic fever, occurring only otherwise in infarction and uremia. Since Aschoff bodies are not constant, they cannot be held causative of the electrocardiographic changes. Myocardial changes take place, circulatory failure may ensue, or abnormalities in the conducting mechanism may arise. In cases in which the circulatory insufficiency is out of proportion to the valvular changes, myocardial involvement is probably to blame. The disturbance in subacute bacterial endocarditis is due to a degenerative lesion in the muscle, and is in contrast to the lesions of rheumatic fever. Chronic valvular disease with auricular fibrillation rarely occurs with subacute valvular endocarditis.

Of 123 cases of subacute bacterial endocarditis, 118 had valvular disease. The average duration of the cardiac defect was ten years, while the bacterial endocarditis probably had had an average of but six months. The blood cultures in 104 of these patients showed an anhemolytic streptococcus in 79, and the influenza bacillus in 2. The electrocardiograph showed an increased P-R interval in but 6, premature contractions in 6, auricular fibrillation in 3, auricular flutter in 1. Regular rhythm was found in all but 5. The writer has never seen a subacute bacterial endocarditis engrafted on an auricular fibrillation of chronic valvular disease.

The electrocardiograph forms an important diagnostic aid in early detecting a heart block in a case having joint pains, and forms a means of differentiating subacute bacterial endocarditis and acute rheumatic fever. It can be used as a reliable indicator of the length of time needed for the patient to remain in bed.

Summary: The author has seen auricular fibrillation only once in an active subacute bacterial endocarditis, though it may be present in the bacteria-free stage. When an arhythmia has been established, a bacterial endocarditis seldom occurs. Depression of the atrioventricular conduction occurs more seldom in this disease than in rheumatic fever. In 61 out of 65 cases of rheumatic fever the heart was involved. The electrocardiograph may detect rheumatic fever before clinical findings are present.

Dr. Benjamin Sachs, in continuing the subject presented a lantern demonstration, beginning with slides depicting characteristic electrocardiographic changes in rheumatic fever, rheumatic myocarditis, pure myocarditis, complete heart block, and aortic insufficiency. Aschoff bodies were shown in the interstitial tissue of the myocardium, especially of the left ventricle, in the atrioventricular rings, interventricular septum, rings of the aorta, and occasionally in the papillary muscles and auricles.

Dr. Emanuel Libman, in closing the subject stressed the great importance of the electrocardiographic method

of diagnosing rheumatic fever. A rheumatic myocarditis may result in hypertrophy, an enlarged ventricle in uncomplicated mitral stenosis being due not alone to insufficiencies, but also to myocarditis. Epistaxis is one of the most characteristic symptoms of rheumatic fever, and may occur before the first attack, at times being severe enough to cause an anemia. Children showing this symptom should be electrocardiographed. As to subacute bacterial endocarditis and auricular fibrillation, since it is unusual to find one superimposed upon the other, it is safe to remove the tonsils in a case of chronic valvular disease with fibrillation.

Dr. Hobart Hare urged a greater attention to the blood in cases of rheumatic fever, since anemia is a profound symptom, and good blood is necessary if the heart is to be built up. Reduced iron, in dosage of ¼ to 1/10 grain three times a day is beneficial, but larger doses should be avoided as constipating.

The electrocardiographic method of diagnosis indicates the advisability of digitalis by showing the condition of the myocardium. Rest is essential to the patient. Digitalis drives the heart, inverts the T wave, and produces many electrocardiographic changes which disease produces; therefore, it may be a supertoxic agent for some hearts. In all myocardial changes, we must be cautious in the use of digitalis. If with digitalis we drive a rumbling heart with a subacute bacterial endocarditis, we may thereby flip off colonies of organisms, and cause a renal septic infarct, a pleural infarct, or a brain embolus and a hemiplegia. On the other hand, in auricular fibrillation digitalis is the sovereign remedy, and may be given freely even in the presence of murmurs. Quinidin, because of its depressant action, is being dropped in auricular fibrillation.

March 23, 1927

NERVOUS DISEASES THAT ORIGINATE IN THE DIFFERENT PERIODS OF LIFE

Forces Collaboratng to Produce Disease

HEREDITY: *Professor Clarence E. McClung (by invitation).*—Heredity is not a condition, but a relation, and we must discuss our predictions in given relations —possibly through tracing a sequence of events and observing their frequency. We know the mechanism of heredity in the germ cells and its method of working under certain conditions. Sometimes a definite prediction is possible. For instance, we know that the litter resulting from the mating of a white with a gray mouse will all be gray; that if these hybrids are bred in sufficient number, one-fourth will be white and these will breed only white; one-fourth will be gray and will breed gray; and of the remainder, one-fourth will breed white, three-fourths gray, as from the first set of hybrids. Gray and white are here contrasting qualities, and their behavior is predictable. Certain characters, furnished by both the male and the female, behave as units and combine and segregate as shown above, the recessive characters sometimes running on for generations, but not apparent until mated with a similar character. The organism is a reaction system, performing definite acts under a given environment.

Under what conditions are nervous systems influenced to depart from the normal? For example, a certain strain of fruit fly at a certain temperature will develop twelve legs, while at another temperature it will grow but six. A second strain will be unaffected by temperature. Here, in the first case, the environment brought about the condition needed by the organism to produce the varied number of appendages. What is not present in the organism, however, cannot be brought out under any environment. The effects of the environment upon the nervous system are not so clear, because of the complexity and high development as a reaction system. We have, however, as helpful suggestions, well-defined reactions such as night blindness and color blindness—a sex-limited character, transmitted by mother to son. We have other instances less exact, as two feeble-minded parents with feeble-minded children, though the heredity of mental deficiency is more general than specific, the definite form to appear in the offspring not being predictable. With greater knowledge, the power of more accurate prediction may come.

PRENATAL: *Dr. S. D Ludlum.*—With Ballantine's *Antenatal Pathology* as reference, the text of this paper is based on the things which can happen to the child in the embryonal and fetal states. Experiments carried on long ago in Egypt, and later in early England, showed that chickens hatched in the sun in a greenhouse were monstrosities. Later, it was found that electric currents, magnets, and varnish or wax on the shell likewise produced monstrosities. The effect was procured only when the eggs were treated during the embryonal period; if after the tenth day, retardation alone occurred, if up to the third day, death of the chick. Ferrer, a Frenchman, by using drugs. attained similar results, approaching nearer to actual pathologic conditions in this manner, however, and raising the question as to the effect of substances taken by the mother upon the child.

Of six hundred defective children, a number had no defective heredity except a disease condition or vicious habit in one or both parents. With mentally defective mothers, no children were normal. In the children generally retarded, mentally and physically, the father was most frequently found to blame; in those with more stigmata, the mother; in those with still more marked stigmata and deformities, both parents. Infection occurring early in gestation produced microcephalics, etc.; while later, arrested mentality was the result. A preponderance of pathologic conditions in the parents resembles a change in the physicochemical environment, and while the hereditary factors are the same, the influences which change other body cells must affect also the germinal material. So in the long human prenatal period it is necessary to differentiate germinal disturbances from later factors such as infection. All such physicochemical changes in the environment of the ova must, therefore, be eliminated before the term "hereditary" can be applied to a character. A germinal defect may be absent, but a nutritional influence responsible.

Factors acting in the embryonal period may result in production of a dwarf, two heads, tail, asymmetry, harelip, extroverted bladder, single kidney, spina bifida, etc.; factors in the fetal period, malaria, smallpox, tuberculosis, dropsy, elephantiasis, alopecia, cardiac anomalies, cystic degeneration of the kidney, hydrocephalus, Friedrich's ataxia, cataracts, etc. Stockton, in experiments on fish, produced at will, by varying the amount of magnesium chlorid in the solution in which the eggs were growing, fish with a single eye or fish with eyes widely set. The solutions made a difference in the growth-rate principle.

PREADOLESCENT: *Dr. T. H. Weisenburg.*—This covers the childhood period from one to fifteen years. What occurs in the nervous system during this period? Until one year of age the motor fibers are not myelinated, and the child does not walk. What happens in that motor tract happens in the entire nervous system. So long as growth is going on, myelinization is going on. Intellectual development, as well,

depends on this, for there is no one intellectual center (hearing being localized in the temporal lobe, vision in the occipital lobe, etc.) and association fibers must be developed to make all parts of the brain function properly. These develop at different times in the person's growth, as many as thirty being known now. Any interruption of the growth of any part of the brain leads to a disturbance in function. Therefore, disease is more serious if it occurs during growth time. There may be found a lack of vitality of the nervous system manifested in an apparently normal child at the age of ten to twelve years by signs of decay in certain tracts of the cord or brain—as in the case of multiple sclerosis and spinal atrophies or myopathies.

Diphtheria, measles, or scarlet fever may leave mental defects resulting from the lesions, serious when occurring in the child. Meningitis, with its plastic inflammation, may lead to hydrocephalus and lack of development, with various defects. After scarlet fever complicated by deafness the child may be mute because it cannot hear itself talk. Diphtheria frequently causes encephalitis and a peripheral neuritis. Chorea, a distinct disease of the basal ganglia, may prove most serious. Tics are commonly misdiagnosed.

The vegetative nervous system develops with the ductless glands, and the cerebrospinal nervous system dominates the vegetative nervous system. For instance, excessive pituitary development results in gigantism; too little, in dwarfism or genital anomalies. Pineal tumors, diagnosed by hydrocephalus and ocular palsies, cause early development of the genitalia. Of the ductless glands, the thyroid is best known. Status thymico-lymphaticus presents certain symptoms, and the influence of the sex glands upon the individual has been shown by castration at different periods. A relation between the gonads and other glands is known to occur, but a definite knowledge of the dysfunction of the endocrines has not yet been reached. Parathyroid dysfunction, through a lack of calcium, causes tetany and certain types of convulsive states, though a normal child with no unusual make-up who has an epileptic fit is always an epileptic rather than a spasmophilic.

ADOLESCENT: *Dr. Charles W. Burr.*—The word "insanity" has outlived its usefulness, since through many erroneous connotations it has been made to include many things unrelated qualitatively, and should be eliminated. The problem of mental function is complicated and abstruse, our knowledge is superficial and influenced by our emotions. Bias plays a large part. Disorders of the mind in adolescence are shown in an abnormal personality and emotions; pride and vanity are used in examination thereof. Personality is of slow growth. The newborn is mindless, with sensation but no emotion, with instincts but no power of reason. Only the motor and sensory cortices and the basal ganglia function. What are the elements which control personality? What are the causes of abnormality of growth and their prevention?

Heredity is of dominant importance, for the potentiality of the mind is carried from generation to generation. Heredity is the stuff upon which environment works. Though by some it is fondly thought that a man can be made a genius by environment, this is but a dream; for while a good environment may save the child of an epileptic from an evil destiny, no environment will make a child a genius. Prophecy as to the future personality is difficult before puberty. If a boy of twelve has a past history of repeated stealing, lying, cruelty, he has little chance to be a good citizen. On the other hand, a child of slow intellectual development, with proper morals, awakening only at adolescence, may surpass an apparently brighter child. A third type, who does not study because he will not, who plays tricks but is not a liar, thief, or cruel, usually makes good.

Diseases of childhood seldom cause mental disease after their infectious stage. Pott's disease predisposes to high intellectual development. We often find extreme brightness in early childhood in the lower races, but these children stop at puberty and often recede. The precocious boy often becomes eccentric and breaks in adolescence. The best boy is the fellow, with healthy reflexes, not cruel, accepting a code of honor, lying only with a motive, and developing evenly intellectually.

Most mental disease is diagnosable at sight if the eye be keen enough. Study of the ductless glands bids fair to help us in this matter, but with them it is safer to go slow with the man of science than to gallop to a cropper. Certain ductless glands together with the vegetative and spinal nervous systems develop physical growth and personality. The administration of some glands is beneficial. Hypothyroidism makes a boy frigid, but he never shows insanity, while hyperthyroidism will produce a brilliancy that may lead to mania. Persistent thymus is associated with persistence of mental youth, with brilliancy, but not wisdom. The cretin is happy but has no intellect; homosexuals may or may not show stigmata. The small mouth and high palate are signs of degeneracy, and in adolescent insanity the skin often shows pigmentation.

How can we prevent mental disorders in the adolescent? The cause is mostly hereditary, and cannot be eliminated by birth control, since those who should use it will not. Its frequency can be known only approximately, and there is confusion of diagnosis. This is an age of intellectual and moral unrest, of great advance in pure and applied science, of growing appreciation of literature and art. Always in such periods we find lunatic fringes, for people develop the ability to read without the ability to think, and the fringe breaks down. The present educational system increases this condition by educating the unfit, for conceited, arrogant minds, attempting science, break. The recent wave of unrestricted immigration increased the element likely to break or to produce weak offspring. An unhealthy Freudian philosophy now being preached has a degrading influence.

The present baby-saving movement has mixed results: when healthy children are saved, good; but when mental and moral cripples are saved, bad. The slogan should be "Save the babies *worth* saving." To save potential morons when consciousness does not exist is a biologic sin. Epidemics both produce and relieve us of some wrecks; e.g., serious evil personality changes resulted from the epidemic of encephalitis. In the borderline group between normal and abnormal (the eccentric, those with tics, obsessions, the mentally unstable influenced by emotions or intellectual environment) much can be done. Mental disorders can be decreased by simplicity, self-control, less frequent talk of intercourse of the sexes; and, since conduct usually indicates the onset of an intellectual breakdown, training in conduct is our only hope.

ADULT AND INVOLUTIONAL: *Dr. Henry Lloyd.*—It is an old and trite saying that life is as long as the life of the blood vessels, and we all know the effect of vascular change as evidenced by apoplexy and cerebral thrombosis. These conditions, however, may occur in children, following embolus in scarlet fever, measles, syphilis, etc. Nearly every one over fifty will show some cerebral sclerosis, and atheroma

is important in age. In the recent epidemic of encephalitis, there were sequellæ closely resembling the Parkinsonian syndrome in adults from twenty to twenty-four-years. At autopsy, the disease was located in certain areas of the corpus striatum (globus pallidus) and in the midbrain (substantia nigra.) Chorea has been thought functional, but the pathology has lately been demonstrated. An acute infection, often first located in the tonsil, with absorption of streptococci affecting the brain centers, has been demonstrated in the putamen.

The tendency of old people to form bad habits must be borne in mind when treating them, for a case of multiple neuritis in a good old elder of the Church may be due to acute alcoholism, or the angina pectoris of a retired doctor may have its origin in morphin. Involutional melancholia is a profound depression coming on particularly at old age, promoted by physical changes such as arteriosclerosis, a contracting kidney, a myocarditis, changes in the brain cortex, ill health, worry, bereavements, limitations, or shelving. It is a mistake to urge old people to stop their work, and in prophylaxis they should be given interests, should be encouraged to read. Old women, with their knitting, are more resourceful than old men. We should all be better for the reading of Cicero's *De Senectute*.

Mary A. Hipple, M.D., Reporter.

SOMERSET—MARCH

The Society met in Somerset, on March 21st. The guest speaker was Dr. Richard J. Behan, of Pittsburgh, who had recently returned from Europe, where he visited medical schools, hospitals, and clinics. He first exhibited lantern slides of the pelvic anatomy, showing congenital and acquired malformations and dislocations, and the satisfactory results of treatment from birth to twelve years of age. He then discussed the subject of cancer, saying that there has been satisfactory advance towards finding its cause and possible cure, and that it has been demonstrated that an excess of lactic acid exists where there is cancer, and cancer exists where there is excess of lactic acid. As yet, it is undetermined whether these conditions are connate or one the result of the other. Be it cause or result, this acid condition requires alkaline treatment, calcium in some form being favored.

H. C. McKinley, M.D., Secretary.

WARREN—MARCH

On March 21st a meeting was held at the Conewango Club with seventeen members in attendance. Councilor H. W. Mitchell gave a report on the various measures up for legislation, and a resolution was adopted, to be sent to the Senator and Assemblyman of our district, asking them to oppose the Nurses' Bill and the Chiropractic Bill and to favor the One Board Bill. The Workmen's Compensation Bill was believed to be in good hands.

Dr. M. V. Ball read a paper on what he termed the "Anatomy of Modern Medicine," an analysis of present trends. He showed how readily physicians take to fads and look for panaceas. The various operative fads were recounted, as well as the electric fads, which seem to be reviving again. The hospitalization of many of the sick, with compensation insurance for the working men, will tend to bring fees down to the basis of what service is rendered rather than how much the traffic will bear. In spite of the fact that it is estimated that from ten million to forty million persons in the United States are adherents of nonmedical and antimedical cults, there never was a time when the regular profession enjoyed a larger income. The leaders of our profession have been able to give vast sums to medical institutions. Thousands of physicians take extended vacations in Florida and abroad. Country towns are willing to subsidize young men and assure them a comfortable living. We need only to be true to science and honest in our convictions to make ourselves the real leaders in preventive medicine, which offers much more genuine success than all of our past efforts in curing disease.

M. V. Ball, M.D., Reporter.

The Woman's Auxiliary of the Medical Society of the State of Pennsylvania

Mrs. Samuel Bolton, *Editor*
4701 Leiper Street, Philadelphia, Pa.

COUNTY AUXILIARY REPORTS

BEAVER

The regular meeting of the Woman's Auxiliary of the Beaver County Medical Society was held at the Penn Beaver Hotel, Rochester, Pa., March 4, 1927.

After a delightful luncheon and the regular business, the meeting was continued with reports from the chairmen of committees.

The *Hygeia* campaign is being carried on most successfully, with a total of eighty-three subscriptions reported. We hope a few more months of work will add substantially to this number.

The chairman of Public Health reported the splendid success of the campaign for the immunization against diphtheria. Beaver County is among the foremost in the State in the percentage of immunizations which were carried out.

Five new names added to our membership was the report from the Membership chairman, increasing our total enrollment to fifty-six.

After a general discussion it was decided to hold a card party to reimburse our treasury. This was referred to the proper committees.

The Reverend Doctor Bostick, speaker of the day, then gave a very interesting book review of Channing Pollock's "Enemies," after which the meeting adjourned.

Mrs. Norman R. Crumrine, Reporter.

GREENE

The regular meeting of the Auxiliary was held in Waynesburg, April 13, at 7:30 p.m., at the home of the president, Mrs. R. E. Brock. The date was the same as that of the County Medical Society meeting which had as its honor guest Dr. Arthur C. Morgan, Philadelphia, president-elect of the State Medical Society.

By previous arrangement, Dr. Morgan, in the early evening, attended the meeting of the Auxiliary and gave a most interesting and encouraging talk in reference to the object and aim of the organization, all of which was greatly appreciated by the members and cannot fail to add renewed interest in the work. The hour having arrived for his next engagement, a few minutes only could be given for a reception to Dr. Morgan.

After a short business meeting, Mrs. S. T. Williams, chairman of the entertainment committee, presented a program of musical numbers—violin and piano—given by Misses Louise Scott and Bess Moredock. Interesting selections were read by several of the members. Mrs. W. M. Parry gave a report on auxiliary meetings which she had attended in the States of West Vir-

ginia and Tennessee. Refreshments were served and a social hour enjoyed.

The Auxiliary accepted, with great pleasure, the kind invitation from Mrs. R. W. Norris to hold the next meeting at her home on West Street.

MRS. R. E. BROCK.

MONTGOMERY

The Woman's Auxiliary to the Montgomery County Medical Society held a meeting on Wednesday, April 6th, at the Nurses' Home of Montgomery Hospital, Norristown, at the same time and place as the Montgomery County Medical Society meeting.

As Dr. A. C. Morgan, president-elect of the State Society was to address the doctor's meeting, he made arrangements to come earlier and address the Auxiliary. He gave a very instructive talk on the work we, the doctors' wives, could do as Auxiliary members.

Dr. George A. Knowles, chairman of the State Society Legislative Committee, also gave a short talk on legislative matters. As he has just been to Harrisburg concerning the chiropractic and compensation amendment bills he brought us some intimate glimpses of the Legislature in session.

A business meeting followed these addresses, with Mrs. Perry MacLaughlin, the new president, presiding. When the Auxiliary was organized in 1924 it was decided to hold only three or four meetings a year, but the enthusiasm has so grown that we find holding the meetings every other month does not seem too often.

At the close of the meetings, refreshments were served to the doctors.

It so happened that there was a joint meeting of the county commissioners, welfare workers, poor board, and hospital board after these meetings to discuss a site for the new hospital for contagious diseases. We were very happy to meet these ladies and gentlemen, and to extend a bit of hospitality to them.

This was one of the largest attended meetings of the Montgomery County Medical Society held for some time, and we feel a little bit is due to having the meetings on the same day and at the same place—and incidentally, having refreshments.

MRS. GEORGE W. MILLER.

PHILADELPHIA

The annual meeting of the Woman's Auxiliary of the Philadelphia County Medical Society was held Wednesday afternoon, March 23, 1927, at the County Society home in Philadelphia. Mrs. Herman B. Allyn presided.

Dr. Frederick S. Baldi, president of the Philadelphia County Medical Society, addressed the meeting, telling of some very pathetic cases with which he comes in contact in his prison work.

The chairmen of the various standing committees then made their annual reports, after which the following officers were elected for the ensuing year: president, Mrs. George Morley Marshall; first vice-president, Mrs. Walter Jackson Freeman; second vice-president, Mrs. George A. Knowles; third vice-president, Mrs. Edward J. Klopp; recording secretary, Mrs. Leighton F. Appleman; corresponding secretary, Mrs. Charles N. Sturtevant; treasurer, Mrs. Edward A. Shumway; directors (each to serve two years), Mrs. Herman B. Allyn, Mrs. Frederick S. Baldi, and Mrs. Charles A. E. Codman.

During the past year the definite object of the Auxiliary was the purchase of and the payment for the beautiful Steinway piano which it presented to the Philadelphia County Medical Society. This has been fully accomplished, and the Auxiliary has also purchased some very attractive china and silver for its own use, and still there remains in the treasury a substantial sum of money.

After the adjournment of the meeting the members indulged in a cup of tea. Mrs. Loving and Mrs. Myer Solis-Cohen were hostesses.

MRS. GEORGE A. KNOWLES.

WESTMORELAND

The Woman's Auxiliary of the Westmoreland County Medical Society held its regular monthly meeting Tuesday, March 1st, at the Log Cabin Tea Room, Pleasant Valley, near Greensburg. An excellent luncheon was served at 1:30 o'clock.

A short business meeting followed, during which the annual election was held, the result of which follows: president, Mrs. H. B. Barclay; vice-president, Mrs. J. S. Silvis; secretary, Mrs. Alfred Porter; treasurer, Mrs. J. H. Fiscus; director for one year, Mrs. W. T. Doncaster; directors for two years, Mrs. C. E. Snyder, Dr. Jean C. Bailey, Mrs. H. A. McMurray.

Mrs. Walker, the retiring president, gave a very short address, closing with the presentation of Mrs. Barclay, the new president.

The members of the Auxiliary presented the retiring president, Mrs. Walker, with a beautiful platinum pin having a diamond setting, in appreciation of her services rendered during the past two years.

The remainder of the afternoon was spent at bridge, Mrs. Sankey winning first prize, and Mrs. Doncaster, consolation prize.

The April meeting will be held at the home of Dr. and Mrs. J. R. Eisaman, N. Maple Avenue, Greensburg, Pa.

MRS. P. G. MCKELVEY.

ABSTRACT OF PROCEEDINGS OF THE TRISTATE MEDICAL CONFERENCE

The fifth Tristate Medical Conference convened at the Hotel Pennsylvania, New York, February 26, 1927, at 10:30 a.m., with Dr. George M. Fisher, President of the New York State Medical Society, in the chair. The members present from Pennsylvania were: Arthur C. Morgan, President-Elect of the State Society; Frank C. Hammond, Editor; and Wilmer Krusen, Director of Public Health of Philadelphia.

In opening the meeting, Dr. Fisher stated that two new developments of work in the New York Society would be spoken of: the establishment of a Public Relations Committee, and the formation of a special committee to study the present state of knowledge regarding cardiac diseases. The first-named committee is to deal with the relations between medical and lay organizations concerning themselves with public-health work; the second committee is to investigate the whole subject of cardiac diseases, but with special relation to recommending measures for their abatement.

Dr. Thomas P. Farmer (former Commissioner of Health, Syracuse, N. Y.): The Assistance Voluntary Agencies Can Render Physicians in the Promotion of Public-Health Activities.—It seems to me at the present time that everything is "public relations." There is no doubt about the assistance private agencies can give the profession. The point will be to find where the dysfunction of the private agencies comes in, and how they sometimes interfere where they should give assistance.

Any person who has had anything at all to do with health work in an official capacity knows how dependent

we are on private agencies for an efficient health program. Discussion of the activities of lay health organizations is not limited to any locality at the present time nor to any group of doctors, and the interest evidenced in such activities shows, in itself, their importance. We can easily say at the present time that it is the most important economic problem to the profession in general. The advantages of the lay organizations are recognized, but the disadvantages of their uncontrolled work are a matter of great importance. I question whether the health organizations will continue just as they have been doing if conditions are not changed somewhat. They have certainly contributed to the achievements of public health by supplementing public funds, they have been able to undertake work that has been outside the domain of public health departments, or which these departments have been prevented by statute from doing, and they have supplemented work already started. We have been able, at times, to start new work which the lay agencies have been able to take over later. I know the ultraconservatism of the medical profession, and that there has been some work which its members should have started, and which the lay organizations would have been glad to have them start, and I therefore feel that these organizations could properly criticize the medical profession for their failure in that direction.

There are some lay associations that perform their work without any criticism at all, and when they can do that and will work in conjunction with the medical profession and with public officials, they are fulfilling their highest requirements.

One of the most important things is to realize the difficulty of defining a lay organization. In fact, the good that has come from them has been due in part to the fact that they have not been able to define their limitations. But what has been an advantage is apt at times to be a disadvantage. They encroach upon the medical profession sometimes by adopting dictatorial policies and manners. They interfere with local conditions oftentimes, and show a tendency to socialize medicine. They destroy previously existing coöperation with the medical profession. Some of these organizations have also exhibited a tendency to operate at a very high overhead cost, with high salary and unreasonable personal expense accounts which do not justify their existence.

The coöperation of the profession is, of course, very important in any preventive medical work. The following discussion by Dr. Rankin was presented at the International Congress of Social Welfare in Washington two or three years ago:

"Just as medicine has been extending its lines further and further away from the cure of existing disease and toward the anticipation of disease, so public health, with its initial interest and work largely restricted to prevention, has found that much of prevention is predicated on treatment and that to realize a further reduction in mortality and morbidity rates, its program must insist upon arrangements for the more adequate treatment of disease, disease in reality as well as in anticipation, for, after all, about the only difference between cure and prevention is chronologic. The public can no more renounce its interest and its rights in the treatment of disease than the medical profession can afford to restrict its work entirely to cure.

"In the development of medicine and public health the work of disease prevention and disease treatment have become so closely related that it is impossible to separate the two. Physiology fades into pathology, health into disease, as the green leaf of spring becomes transformed into the brown death of autumn. The unoccupied field in medicine, of health promotion and disease prevention, cannot be separated into two parts, one involving the problem of cure, the other that of prevention. The two problems are inseparable.

"The interrelated, inseparable problems of disease prevention and treatment cannot be dealt with by two separate forces, one responsible for cure and the other for prevention. Separation of forces means lack of understanding and absence of coördination between workers whose tasks are much the same; it means friction and conflict with resulting harm to both medicine and public health. Combination of forces means understanding, coördination, and increased efficiency for both branches of medicine.

"But there is a much more important reason why two forces, one a group interested in prevention and public health and the other in the private practice of medicine, cannot occupy this field of disease prevention and health promotion, and this more important reason is that, practically speaking, there is but one group which is or can be made anything like adequate for dealing with this problem. That group is the medical profession. If the health officials of this country should undertake to organize, train, and enlist a corps of workers sufficient to deal with the present field of disease prevention and health promotion, they would have to contemplate a force of from 100,000 to 200,000 professionally trained officers; furthermore, that force would be engaged in a task so intimately related to the work of private practice, with so much overlapping, that there would be constant friction, conflict, lost motion and efficiency. There can be but one well-organized force in the field of vital conservation, and that force must, both by reason and necessity, be made up of health officials, always greatly limited in number, and the rank and file of the medical profession.

"As the work of health officials and physicians cannot be separated, but must be coördinated, an understanding as to related responsibilities is essential. A proper division of responsibilities will be predicated on the general principle that the members of the medical profession shall perform such items of public-health service, both of a curative and preventive character, as their training and number make possible, and that for such items of service, they shall be paid a reasonable compensation, the medical profession taking into consideration, in determining what is reasonable compensation, the difference between bulk work and the individual case work, between wholesale and retail prices; and further, that health officials, representing the public interest, shall so organize and restrict their personnel as to provide for the medical profession rendering the aforementioned services, the health officials devoting themselves largely to enforcement of health laws, particularly quarantine, passing upon items of service rendered by the profession for which remuneration is claimed, and in so organizing social and professional forces as to enable these forces more completely to occupy and hold the field of disease prevention and health promotion."

Dr. Rankin has covered very well the importance of the coöperation of the medical profession and the health organizations. I feel that the work of the lay organizations, which is absolutely necessary and upon which we are dependent, and for which we must give them all the glory they are entitled to, must be continued. If we all work together, certainly the results will be very happy and beneficial.

Dr. Lawrence: Will Dr. Farmer give us a definition of "lay organizations"?

Dr. Farmer: I prefer the term "private health organization." As a matter of fact, I myself am on the board of directors of one of these lay organizations, and I want to make it clear that I am attacking an agency of which I am a member. Such associations should be headed by physicians, and I believe the physician should seek representation in lay health organizations.

Dr. Wilmer Krusen (Director of Health, Philadelphia, Pa., and Chairman of the Committee on Public Relations of the Medical Society of the State of Pennsylvania): While Dr. Farmer was talking, I was reminded that it was a very wise man who said: "We can choose our friends, but the Lord gave us our relations." We have public relations and we cannot eliminate them. We have to consider them and coöperate with them. We may not like our relations—sometimes we do not—but no health officer can escape contact with the public. He must have their coöperation or their criticism. Sometimes their criticism is constructive and valuable; sometimes it may arise from an ulterior motive.

First, I wonder whether I might discuss a man I have never seen—the ideal superman health official, and the characteristics which he possesses. I have never seen him in my entire circle of health workers. In the ordinary course of events it takes twenty years for the knowledge of a disease to spread through society and become a matter of common thought. As an example, take the propaganda for the elimination of tuberculosis: We had to educate the public, we had to gain the support of thoughtful people before the reduction of this disease was brought about. The same thing is true today in the fight against diphtheria. We know that it

is a preventable disease. We know that death from diphtheria can be avoided if the parents will permit the necessary treatment, and we can eliminate the disease by 1930.

Conciliatoriness is a thing which the health officer must possess if he wants to have the highest degree of coöperation from the doctor and the layman. He must have knowledge and initiative. Some of these very well educated men and women, inspired possibly by their family doctors, get ahead of the health officers and we have to catch up, but it is our duty to catch up and to lead the procession if we can. It is a good thing to invite lay organizations to hold their meetings in your own office, and then you know what they are doing. They do not leave with the idea of harming public-health work. I think they are sincerely interested, but are often mistaken and untrained. After all, no public-health work has ever been inspired except indirectly by some discovery of a doctor. It is the doctor who has studied and taught the subject. As in the Gorgas work, or in Dr. Osler's work when he started the fight for better water in Baltimore, there has been some doctor who has inspired the organization of nearly all these health agencies.

The health officer, as a recent writer has said, must preserve the golden mean between zeal and timidity. If he becomes too aggressive and goes ahead of public sentiment, he will not get anywhere; neither will he if he is a coward and is timid. What have you educated your public to expect of your public-health officer? How far are you going to back him? Do you have confidence in his judgment? Do you have confidence in his honesty and in his sincerity? That is a personal equation and you cannot get away from it in the practice of medicine nor in the broader field of the work.

Dr. S. B. English (Superintendent of the State Tuberculosis Sanatorium, Glen Gardner, N. J.): Most of my experience in health work has been along the line of tuberculosis only. Of all the free and private agencies of New Jersey, our so-called State Tuberculosis League is probably the largest, with a branch in every county in the State, and spending $250,000 a year in addition to contributions. We have never had the success that Dr. Krusen has had in leading lay agencies into the health officer's office. We have had at various times considerable friction of opinion between the profession and the private agencies over matters of policy. I have been personally of the opinion that the job of our State Tuberculosis League was to demonstrate the need of health work. I have always thought our money should be spent chiefly in the line of demonstration, and that afterwards our work should be turned over to the official agents or to the medical profession. In so far as possible we have been trying to do that, although it has been difficult to make the lay organization understand that when they have demonstrated a certain project they shall not go ahead and clean it up.

It seems to me that the medical profession should make a more concerted effort, as has been done in Philadelphia, apparently, to have more to do with the operation of these so-called private associations. I know that if a number of our private organizations in New Jersey did not have doctors associated in their management we could expect nothing but difficulty, and I believe that the problem would be more easily solved if some concerted effort could be made to secure more medical management in the active work of these organizations.

Dr. James S. Green, Elizabeth, N. J.: The keynote to the whole situation is for each county medical society to have an active public relations committee to coördinate the work of private associations.

Dr. J. B. Morrison, Newark, N. J.: In New Jersey we have not taken the guiding part in these voluntary organizations that we should. We ought to go home to our societies, state and county, and do all in our power to disperse the feeling of distrust in them which exists largely in the minds of those who have not been actively engaged in public-health work. These organizations are here to stay. The vastness of their work in municipal and local affairs is enormous, and it needs coöperation and, from our point of view, guidance, but it behooves us all to get behind them so that they can produce the best results in public health for the entire nation.

Dr. James E. Sadlier, Poughkeepsie, N. Y.: There is an attitude in every district derogatory to the work of the welfare organizations. It is hard to understand or to explain why they should not coöperate well and do away with jealousies which seem to exist. Nevertheless, in every community there are a certain number of big, broadminded physicians who are willing to take up big tasks and carry them through to a finish. It seems to me that in our respective states it is going to be our business to select from the various county organizations the men who can be relied upon to accept positions on public relations committees and gradually break down this barrier. This will be relatively easy in many counties. The big job will be to find men to carry on this amalgamation without jealousy toward the voluntary organizations or the medical societies.

Dr. Henry O. Reik, Atlantic City, N. J.: My association with the New Jersey Society has disclosed a good many points of conflict between these voluntary agencies and the profession as represented by the State or county society, and more frequently by the individual family physician himself. I have found that oftentimes the attitude of the medical man is unreasonable until things are explained to him, though, of course, we can pretty well understand his suspicion of lay organizations attempting to do the work.

Dr. George M. Fisher, Utica, N. Y.: Along this line I want to make an announcement which shows how this movement is progressing. On March 25th there will be a meeting in Chicago of representatives from all national lay health organizations, called by the American Medical Association. This shows the influence of Dr. Wendell Phillips, the President of the A. M. A., and is a great advance. They will discuss there exactly as we have discussed today, and as we discuss in the State Charities Aid Association, how physicians and lay organizations can work together harmoniously. The future holds tremendous possibilities if the physician will coöperate properly with these lay organizations.

Dr. Nathan B. Van Etten (Chairman of the Special Committee on Nursing of the New York State Society): The two committees of which I happen to be chairman, the New York State Committee and the American Medical Association Committee, have been working together, and have accumulated a very large amount of material which is largely represented by the expression of opinion from a great many people. I have been working on this subject for about three years without reaching any solution of the problem. I presume nobody has arrived at any solution, but we have some ideas that may be conducive to the mechanics of the problem; for instance, establishment of central or official registries for nurses, development of group nursing, and of part-time or hourly nursing—questions of that kind which

are really associated with the mechanics of nursing but do not solve the nursing problem. We have submitted a definition of the "basic nurse," that she should be a nurse trained for two years, and sufficiently qualified to nurse patients in hospitals and homes.

We have gone into a study of the curriculum in a general way, but not in a specific way because we have not had time to do that. I should like to have you think about the feasibility of continuing the study on the plan of having the fundamental subjects of the nursing course made a prenursing course. For instance, anatomy, physiology, chemistry and bacteriology to be taught before the real nursing course begins. The trouble with the teaching of these subjects in the training school is that very often the teachers are not there. The complaint is that hospitals cannot afford to pay for such teachers. My notion is that of simply suggesting a plan whereby anatomy, physiology, chemistry, and bacteriology may be placed in a prenursing course, to be carried on in junior colleges, universities, high schools or any other place that anybody wants to take these courses, and that the nurse be required to take an examination in these subjects, and passing this examination will qualify her to enter schools of nursing. Of course, that will be violently discussed because it will disturb the curriculum of many of the training schools. At the same time, it will give the nurse what she ought to know in these four subjects before she goes into the hospital training school. Then she will get the application of her previous knowledge along the different lines, and she will not be obliged to stay in the hospital training school so long. That is, she will get her whole two years in the training school studying the art of nursing by demonstration, by participation, and by practice. And after all, that is the fundamental way to educate any body.

Dr. Morrison: It impresses me that Dr. Van Etten's suggestion that nurses take a prenursing course will further markedly curtail the number of nurses available. It will mean that the prospective nurse cannot secure in the public school or high school the education that is necessary to fit her for training as a nurse. She must leave home and spend a year, at least, in some special school before she can enter a nurse's training school. That is a subject which needs considerable thought.

Dr. Dougherty: I want to endorse what Dr. Morrison has just said. Dr. Van Etten's idea, of course, applies to one class of nurses. If you follow his ideas, you are training girls for public-health service, for social-welfare work and things of that character, and for teaching in schools of nursing. As physicians and as hospital surgeons we do not want that kind of girl. We need bedside nurses who have a good common English education. A grammar-school education, even, is far better if the nurse is well trained in bedside nursing and is competent to think along the lines of instruction which the surgeon gives her. She will make a far better nurse than a girl who is so highly educated that she looks down on the interns in a hospital as being inferior to her. The trouble we now have is that the nurses will not take instruction from the surgeon, for they think they know more than the surgeon does. They are not willing to work as they used to work. Interns are not willing to work now, either.

Dr. Green: The question of the educational requirements for nurses, as was pointed out at the last conference, shows that we are really overeducating our nurses, and after a nurse has completed her course she does not want to work. In the hospitals with which I am connected, I have almost come to the conclusion that the nursing authorities there look upon the hospital as a means of teaching the nurse rather than treating the patient. It is not at all unusual, if you have operative work to do in the afternoon, to find it difficult to get nurses because they are all off at class. These educational requirements have in our state been acquired by the action of the Nurses' Association while we doctors were asleep. The nurses now even have certain requirements that the hospital must provide before the school will be recognized.

Dr. Sadlier: Far be it from me to decry the education of any person or group, but when we make a standard too high for the nurse, we keep out of the training school that great group of girls who have been deprived of a high-school education but who have a reasonably good grammar-school training, who are the first-born in large families and know what it is to do housekeeping and take care of the younger members of the family. It is the slipshod young girl who has all these privileges of education who now becomes a nurse.

DOCTORS FOR THE COUNTRY

Recent distressing cases have directed wide attention to the need in rural districts for the "old-fashioned country doctor," or general practitioner, who lends his aid wherever it is needed, without regard to the nature of the illness and without becoming too highly specialized in some particular field of medicine. It is gratifying, therefore, to hear of some definite action being taken to provide doctors for such localities. In the State of West Virginia a survey has disclosed an alarming scarcity of doctors, sometimes only four or five being resident in an entire county. The House of Delegates of that State has passed a bill, which now awaits Senate action, providing for an election to decide whether the voters will consent to educate at public expense one or more persons in the medical profession who would subsequently practice in the county itself.

This is no new proceeding in other professions, at least under State control if not that of individual counties. Teachers are educated in the State normal schools, under promise to devote at least two years of their services to teaching in the schools of the State. With physicians a somewhat similar program might be followed. The chosen applicant, who might, by the way, be either man or woman, would be educated at county expense, under promise to locate later on in that same district. West Virginia suggests that a period of ten years of practice be nominated as a minimum requirement.

The bill in question provides that the Board of Education shall be the one to select the applicant, who must be a graduate of either a first-class high school or a State normal school, at least 18 years old. He would be sent to the State University and would there receive his medical education as a special student. While the details of such a plan would have to be worked out to fit local requirements in other neighborhoods it would seem that West Virginia has hit upon a promising scheme to bring back the country doctor. Other states with large areas of sparsely settled territory would do well to insure their future supply of physicians in similar manner.—*Philadelphia Record,* April 28, 1927.

All men should be honest in reporting contagious diseases. It is bad practice to try to save a family the inconvenience of a quarantine.

THE

MEDICAL SOCIETY OF DELAWARE

THE PREVENTION OF MATERNAL AND INFANT MORTALITY*

S. JOSEPHINE BAKER, M.D., Dr. P.H.
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The prevention of maternal and infant mortality in the United States during the past five years is closely allied with the enactment of what is known as the Sheppard-Towner Law, or, to be more exact, the Federal Act for the Promotion of the Welfare and Hygiene of Maternity and Infancy. Any consideration of this subject must, therefore, include a brief survey of what this Act has accomplished and what it may promise for the future.

The Sheppard-Towner Act was signed by President Harding on November 23, 1921. The money appropriated, however, was not available for expenditure in the various states until March, 1922. The Act provides for a direct allotment of $5,000 to each state, with a further allotment of $5,000 to each state matching the appropriation and a further allotment of a pro-rata amount of the remainder of the appropriation, based upon the population of each state, provided the state will appropriate an equal amount. The total money available amounts to $1,190,000 each year. The Act is administered by a Federal Board of Maternal and Infant Hygiene consisting of the Chief of the Children's Bureau of the Department of Labor as chairman, the Surgeon General of the United States Public Health Service, and the United States Commissioner of Education. The states determine their own programs of maternal and infant hygiene, and when these are approved by the Federal Board the money becomes available for expenditure by the state. The relation of the Children's Bureau to the enforcement of the Act is thereafter advisory, and the full administration of each state's work is left entirely within the jurisdiction of that state.

Before the enactment of the Sheppard-Towner law, there was comparatively little work being carried on anywhere in the United States for the prevention of either maternal or infant mortality. Certain cities had instituted bureaus of child hygiene, and had shown by their efforts that both the maternal and infant mortality could be definitely reduced by the application of public-health education directed toward the prevention of the diseases which had formerly wrecked such havoc among mothers and babies. In New York City, which organized the first bureau of child hygiene in this country, the baby death rate had been cut in half by such widespread education of mothers and the application of the simple methods that keep babies well instead of the difficult and unsatisfactory efforts of attempting to cure them after illness has already begun. But, with the exception of a few states which were making feeble and generally ineffective efforts in this direction, the pressing problem of our high maternal and infant death rate was receiving little attention. The response to the opportunity offered by the Sheppard-Towner Act was immediate, and at the present time its provisions and aid have been accepted by all but five states; Maine, Massachusetts, Connecticut, Kansas, and Illinois, and Hawaii has recently been included by virtue of a special act of Congress. At the best, the appropriations available to each state, even with the additional state appropriations, are much less than the situation demands, but a definite beginning has been made and definite results are already shown. Our efforts to save our mothers and babies are now nation-wide, for even those states that have not taken advantage of the Federal aid have instituted child-hygiene work supported wholly by state appropriations.

I think that there can be no dissenting opinion to the statement that all mothers are entitled to the information and education which will keep them and their babies alive and well. But that desirable goal has not yet been reached. Owing to limited appropriations, it has seemed necessary to concentrate the greater part of our efforts on that portion of the population where the need has seemed greatest, and to reach, so far as possible, those mothers and babies who because of poverty or extreme ignorance would otherwise be without any such help. In the past

*Read before the Medical Society of Delaware, Dover, October 13, 1926.

we have found our highest maternal and infant death rates in these groups. An indication of what may be accomplished for all mothers and all babies lies in the great reduction in death rates and the marked improvement in health that has come to the groups who have had this instruction and supervision. In one city the infant death rate among the babies of foreign parentage and in the poorer part of the community has been reduced one half, while in the same city the baby death rate has shown an increase among those in families who presumably were able to pay for medical care. It seems clearly evident that future success must be largely measured by the extent of coöperation given by the medical profession and education of mothers to consult their physicians for the purpose of prevention of illness and for instruction in the way in which they may keep themselves and their babies well. The Children's Bureau and the states have made a beginning toward this coöperation by having a definite policy of presenting their plans for work to the medical profession before they are put into effect, and they are keenly aware of the vital need of close association between the medical profession and the public-health officials in formulating effective programs for the greater safety of mothers and babies.

Although there has been a distinct reduction in the maternal death rate in the United States, our situation in this regard is still far from enviable. In 1918 the maternal death rate per 1,000 living births was 9.2; in 1924 it was 6.6. Yet among eighteen nations having available birth and death statistics, the United States now stands seventeenth in its maternal death rate. There is only one civilized country in the world that has a higher maternal death rate than the United States; that is Chile. In order that we may understand in some degree why we are in such a humiliating position and why this country is so seemingly negligent with regard to the safety of women at this critical time, we must know something of the reasons why childbirth seems so unsafe when contrasted with the conditions in other countries.

The last official statistics issued from the Census Bureau on this subject are those for 1921. From these we learn that during that year 15,027 women died from accidents and diseases incident to childbirth. Of these deaths, 40.3 per cent were from puerperal septicemia; 31.1 per cent were due to other diseases incident to pregnancy; and the remaining 28.6 per cent resulted from what are known as accidents of pregnancy. From the medical point of view, and in the light of our present knowledge, it seems safe to assume that the two first groups of deaths, comprising 71.4 per cent of the total, could have been prevented either wholly or in greater part. In other words, if it were possible to apply the knowledge we possess, we could save ten thousand of these lives each year and reduce the maternal death rate two thirds. It is possible also that some of the so-called accidents of pregnancy might be avoided by better obstetrical training and practice.

A factor which has been considered as having a distinct relation to our high maternal death rate is the extensive employment of midwives in certain localities and among certain groups of our population. We do not yet know how many midwives there are in the United States. Many of the states are recognizing the danger of unskilled attendance at the time of childbirth and are adopting methods of midwife supervision and training. Among many groups of our foreign population, the use of the midwife is a traditional practice, and this is true in cities as well as rural communities. In practically all of the European countries, midwives are well trained and under governmental supervision. With such safeguards, their practice has been made safe for both mothers and babies. In this country we have had to deal with untrained, unskilled, and often dirty and densely ignorant women whose habits and methods of practice have undoubtedly been responsible for many deaths of mothers at the time of childbirth. The decrease in our maternal death rate, even though it has been small, has been due undoubtedly to our efforts to deal with this deplorable situation. Classes for the instruction of midwives are being held in twenty states, and the results are already apparent. Higher standards of practice have eliminated to a great extent the worst type of midwife and improved the methods of those now practicing. In several states this is shown by the decrease in the number of women employing midwives and the total number of the latter. In New Jersey the excellent work in this direction that has been carried on has resulted in decreasing the number of cases under the care of midwives from 30,000 in 1919 to slightly over 17,000 in 1924. In New York, 16 per cent of the births were cared for by midwives in 1916 and only 8 per cent in 1924. In Michigan the reduction was from 6.9 in 1921 to 4.4 per cent in 1924. Virginia has reduced the number of midwives in the state from 9,500 to 5,000; South Carolina from 6,000 to 3,000. A universal requirement of adequate training and continued supervision of all midwives will inevitably result in a still greater lowering of the maternal death rate and the elimination of the unfit midwives. The use of the Federal and state appropriations for this pur-

pose have already shown such splendid results that we have every reason to expect still further improvement in this direction.

But granted that the midwife situation may be brought under full control and made safe for women who must secure that method of care or none at all, there still remains great need for further coöperation from the medical profession in making childbirth a less dangerous experience. The extension in the states of what is known as prenatal care has been gratifying and productive of splendid results. Supervision of women during pregnancy, the use of a series of prenatal letters (now sent out to expectant mothers in eighteen states) and the establishment of maternity centers have all shown that our maternal death rate can be still further reduced because of the actual achievement that has been demonstrated. But we need a recognition on the part of our medical colleges of the importance of obstetrics, and more extended and widespread opportunities for obstetrical training for medical students. I think that one of the greatest opportunities open to the medical profession today lies in their realization of the importance of this matter and their consequent determination to make childbirth as safe for the women of this country as it is for the women of any other country. Such a determination backed by the common purpose of the medical profession of the United States, together with the efforts of the Federal Government and the states to control the practice of midwives, can and will achieve this result.

We have cause to congratulate ourselves on the present status and the trend of our infant death rate. In a list of twenty-four countries of the world, the United States stands eighth in its baby death rate. The only countries showing a lower infant death rate are: Australia, the Irish Free State, the Netherlands, New Zealand, Norway, Sweden, and Switzerland. Since the Sheppard-Towner Act went into effect in 1922, the infant mortality rate has declined 4 points, from 76 in 1922 to 72 in 1925. A more graphic illustration of our improved conditions is shown by the fact that when the Children's Bureau was established in 1912 there were over 300,000 baby deaths each year in the United States; in 1925 there were approximately 180,000 baby deaths. This saving of baby life has resulted largely from the widespread campaign of public-health education of mothers in the right methods of baby care. In your own State of Delaware, the baby death rate has been reduced from 100 deaths for each 1,000 births in 1922 to 90 deaths for each 1,000 births in 1925. But as I have had the great privilege of being associated with this work of baby saving since it was first started in this country, in New York City in 1908, I should like to state my conviction that the present reduction we have gained, large as it is, may be and should be still further reduced in the next few years. Saving babies and improving the health of young children is an easy task. In no other field of public-health work can we be so sure of obtaining the results we desire to achieve. If we can continue the work that has already been established and can make available to every mother in this country the information that will enable her to keep her baby well, we may look forward with assurance to making the United States the safest country in the world for babies.

It is not my purpose to outline in detail the methods of public-health work for baby saving. To do that would take far more time than is at my disposal. The basic idea is to make available to mothers the simple facts about the hygiene of infancy and to show them how they may readily use them. The establishment of baby health centers where mothers may come for this instruction and may bring their babies for health supervision and care by physicians and trained nurses, home visits made by nurses for more detailed observation and guidance, classes for girls—the so-called Little Mothers' Leagues—and demonstrations of the right methods of baby care through moving pictures, exhibits, posters, and printed circulars are all effective and widely used. During the past year, 506 new permanent baby health stations have been established in the various states and in every state there has been an increasing use of the other methods. As an indication of the great interest of mothers in this service, the Children's Bureau has received from them over 100,000 letters asking for advice during the past year. Over 5,000,000 copies of the Bureau's bulletins on "Prenatal Care," "Infant Care," and "Child Care" have been issued.

If our present infant mortality is to be still further reduced, increased emphasis will have to be placed on prenatal care. The reduction in the number of baby deaths that has already been secured is due mainly to better community sanitation, a more adequately guarded milk supply, more natural nursing as opposed to artificial feeding, and the consequent reduction in the number of deaths from diarrheal diseases. At the present time, over 40 per cent of all baby deaths occur during the first month of life. They are due almost entirely to what is called prematurity, malnutrition, or congenital debility—all largely dependent upon prenatal conditions affecting the health of the mother. It is evident that no amount of instruction of the mother or care of the baby after birth will serve to save the lives of these babies. But repeated demonstra-

tions of health instruction to groups of expectant mothers have shown that this death rate during the first month of life can be reduced one-half or even two-thirds if all expectant mothers can have adequate care and health instruction during their period of pregnancy.

The present Sheppard-Towner Law will not be in effect after this year. An Act for its extension for two more years has passed the House of Representatives in Congress. The bill was amended in the Senate Committee to limit the extension to one year. The recent session of Congress failed to act on it, but it may be brought before the Senate in the next session beginning in December of this year.

As I have stated, the annual appropriation for the welfare of the mothers and babies of this country is slightly more than one million dollars annually. It may not be amiss to call attention to the fact that Congress has appropriated $75,000,000 for the current fiscal year for Federal aid to good roads, and it may also be mentioned that a single battleship costs about $20,000,000. If we accept Federal aid for our roads, we can hardly consider it wrong to accept it for our mothers and babies, and surely our women and children are worth at least one-twentieth of a battleship. We have gone far in our protection of child life, but until every mother is assured of safety when she gives birth to a child, and until every baby has its chance to live and be well, we shall not have reached our goal.

ABSTRACT OF DISCUSSION

J. W. BASTIAN, M.D. (Wilmington, Del.): Is there not the possibility of a mistake in our maternal-mortality statistics as compared with other countries? In Delaware, the death rate is greater among the foreign born, and also among the negroes. Death certificates must be obtained from the Board of Health; consequently all women who die in labor or shortly afterward are reported, while many normal births are not reported. As a result, the death rate in Delaware is high.

Unfortunately, physicians are graduated from medical schools poorly equipped to do obstetrics. Doctors will take charge of maternity cases without hesitation who would not do a simple appendectomy without special training. We also have our midwives.

DR. BAKER (in closing): In thirty-three of the states the birth rate is not more than 90 per cent effective. All our figures are based upon the birth reports of those states, and the mortality figures given out are not based on the population of the United States as a whole or upon those states that have imperfect birth statistics. Our comparative death rate is based upon each 1,000, so that we have a fairly definite basis. We know it is over 90 per cent correct, because it is based only upon the registration states.

QUESTION: You do not investigate to determine the cause of death?

DR. BAKER: That is done in many places but not universally because the decision is up to the health department. In some states the cases are all followed up to determine the ultimate cause of death and the beginning of the trouble. In New York City we had an idea that the midwives were responsible, but investigation showed that the doctors had more cases of septicemia than did the midwives. This, of course, was due partly to the fact that the doctors' practice was more varied, and the midwives, as soon as they became frightened, would turn such cases over to a doctor. The only doubt I have is that many deaths from septicemia are not recorded. Our maternal death rate is probably lower than statistics show.

A. T. DAVIS, M.D. (Dover, Del.): A check-up of our death rate showed it to be 97 per cent.

ECLAMPSIA*

Report of Five Cases

J. ALBERT AVRACK, M.D.
LEWES, DEL.

When confronted with a case of eclampsia, the physician is forced to think quickly, seriously, and soundly. The prognosis is always serious, for this is one of the most dangerous conditions of pregnancy.

Eclampsia is an acute toxemia which may occur during pregnancy, parturition, or the puerperal state. It is usually accompanied by clonic or tonic convulsions during which there is a loss of consciousness followed by more or less prolonged coma. It frequently results in death. Statistics are indefinite regarding the percentage of labor cases in which eclampsia occurs. The conservative practitioner is said to have at least one in five hundred, and lying-in hospitals report at least one in one hundred. The reason for this is that patients who have had a convulsion or some suspicious symptom enter a hospital instead of remaining at home as planned.

This unfortunate complication is encountered in the second half of pregnancy, and becomes most frequent as the term approaches. Williams, obstetrical chief of Johns Hopkins University, says that it occurs in 55 per cent of cases antepartum, 22 per cent intrapartum, and 23 per cent postpartum. He concludes that practically 77 per cent of cases occur close to the end of labor.

ETIOLOGY

Twin pregnancy, hydramnios, heredity, extrauterine pregnancy, acute nephritis (11 per cent), and a tendency toward albuminuria are the outstanding predisposing factors. Recent research shows that albuminuria is not always present in eclampsia. The classic direct causes given for the malady, however, are: (1) fetal metabolism; (2) the entrance of fetal placental elements into the maternal circulation; (3) poisoning by sub-

* Read before the Sussex County Medical Society, Lewes, Del., February, 1927.

stances formed or retained in the placenta, as proved by the fact that injection of such substances causes convulsions; (4) disturbances of the maternal metabolism, as shown when fetal blood is injected into a woman; (5) anaphylactic reaction of pregnancy; (6) mammary toxemia. A veterinarian has stated to me that often injection of air into the breasts or mammary glands of animals will relieve convulsions and milk fever at parturition. Selheim reported a case in which breast amputation caused immediate recovery.

Symptoms

Regardless of teaching concerning predisposing and direct causes of eclampsia, eclamptic convulsions often occur without warning. When the convulsion first begins there is a fixed expression of the eyes and disturbed vision which soon leads to a rolling of the eyes from side to side. The pupils are usually dilated. The convulsive movements occur first about the mouth, the face becoming more or less distorted, then extend rapidly to the arms, body, and legs. The convulsions are usually clonic, the breathing tortuous, the face flushed, and the patient may foam at the mouth and frequently bite her tongue. During the convulsions, which may last for a few seconds to two minutes or more, the woman is profoundly unconscious, and finally passes into a condition of coma. A single convulsion may occur at first, as a forerunner of other convulsions which tend to become more severe and more frequent. Blood pressure is increased, and may reach 240 or 260 mm., with a full bounding pulse. The temperature usually remains normal, but may reach 104° or 105° at times.

In a small number of cases due to hepatic involvement, jaundice occurs. The urine, in eclampsia, is the warning signal. There is marked renal insufficiency, and sometimes complete suppression, followed by general edema. The microscope shows various types of casts, mostly hyalin and granular. Blood is nearly always present. Albumin is almost always a constant factor, and is so heavy at times that in one instance we had to dilute the specimen several times its bulk to proceed with further accurate laboratory examinations. However, this tends to disappear after delivery. The heart (myocarditis), the brain (edema, thrombosis, anemia, etc.), and the liver (hepatitis) are also affected.

Prognosis

The prognosis is grave. Maternal mortality runs about 25 per cent, and fetal mortality from 33 to 50 per cent. This is rather a conservative estimate, in that it has been given out by well-trained obstetricians at clinics for this purpose. It is said by Dr. Polak, of Long Island College Hospital, that he rarely comes in contact with a woman who is subjected to eclampsia more than once. However, he says also that uremic convulsions often occur in such cases, due to chronic nephritis, and might be mistaken for eclampsia. In other words, he thinks there is a possible immunity.

Treatment

The treatment first, of course, resolves itself into prophylactic measures such as the usual care allotted pregnant women, and faithful adherence to regular routine urine examinations. Then, too, immediate institution of appropriate treatment and diet is essential as soon as symptoms appear which indicate faulty elimination. When these precautionary measures fail, prompt induction of labor has saved many a life. At present, however, despite all we can do, eclampsia will still occur. When it is at hand, immediate action on the doctor's part is essential, and the patient should be safely moved to the nearest hospital if possible. During the attack, a thick cork or folded towel should be placed between the teeth to keep her from biting her tongue. No food and little medicine should be given, but fluids should be forced. The effects of thyroid extract and lumbar puncture are uncertain. Veratrum viride is only temporary in its effects. Every effort at symptomatic relief and elimination must be employed.

There are six methods in vogue for opening the uterus: (1) manual dilatation, (2) use of hydrostatic bags, (3) use of metallic instruments for dilatation, (4) incision of the cervix, (5) vaginal cesarean section, (6) abdominal cesarean section. We at least have this in our favor: if we cannot prevent or cure eclampsia, we can remove pregnancy. This of course is heroic treatment but, if done before convulsions occur or after a single convulsion or two, as a rule, recovery is prompt. In a minority of cases, venesection, where there is a full and bounding pulse, taking 600 to 1,000 c.c. of blood, may lower the blood pressure and increase the output of urine. If this is not undertaken, or if it fails in the desired effect, delivery should be accomplished irrespective of the condition of the cervix or whether labor has begun or not. If the cervix is fully dilated, the child should be delivered by forceps or version, as deemed best. Where the cervix is partially open, hard, the canal obliterated, and manual or instrumental dilatation is ineffective or unwise, the next choice

is one of the operative procedures noted above. In most cases where a radical, quick procedure is required, we resort to cesarean section.

Case Reports

Case I. Mrs. E. D., of Frankford, Delaware, a well-nourished white woman, twenty-five years of age, multipara, was carried into the Beebe Hospital at 2.35 p.m., September 1, 1925. The patient was struggling violently, and proved to be irrational. Her temperature was 100°, pulse 120, respirations 26. She had had a number of severe convulsions, and had been unconscious for thirty-two hours before admission. There was a sweet, sickening odor to her breath, like that of uremia. There was a general edema which was most marked in the vulva and extremities. The patient was apparently in labor, with what appeared to be a large child presenting in the right occipito-anterior position. The blood pressure was 138/98 (the low blood pressure in this case can probably be accounted for due to failing myocardium), the heart rate 120, and there was a gallop rhythm. Rectal examination was made, and the child's head was found fixed low in the pelvis. There was a complete old perineal tear, and the vulva was edematous and bruised. On catheterization no urine was obtained. A hot colonic irrigation was very effective. Digalen M. xxx and morphin ¼ grain hypodermically were given to quiet the patient. Magnesium sulphate oz. 3 was given by mouth, fluids were forced, hot packs were applied, and she responded with profuse perspiration. Labor began at 8 a.m. on the morning before admission. Contractions occurred at irregular intervals. She showed no signs of pains, and the membranes were found to be ruptured. Gas anesthesia was given and delivery made by forceps of a male child, stillborn, weighing 11 lb., 12 oz. The placenta followed fifteen minutes later. Hemorrhage occurred repeatedly up to twelve hours after delivery, in spite of attempts to stop it with ergot, and the vagina was packed with iodoform gauze, the foot of the bed having already been elevated.

That night the patient slept at intervals, and in the early morning hours became very restless. She voided and defecated involuntarily. During her entire stay, there was no opportunity to obtain a specimen of urine. Later in the morning her pulse rose to 140, and temperature to 104°; respiration remained 24. Fluids were forced, hypodermoclysis was used, digalen was given for the heart, ergot for hemorrhage, morphin for restlessness, and urotropin as well as atropin was also given. The patient continued to sink fast, and all our efforts to save here were in vain. She died at 6.30 a.m., the second morning after admission.

Case II. Mrs. B. M., of Lewes, Delaware, white, 23 years of age, multipara, was admitted to Beebe Hospital at 11.45 p.m. September 9, 1925. On admission, she was greatly swollen, with considerable edema of the vulva and abdominal wall. She complained of intense pain in back and head and severe epigastric burning, having had the two latter symptoms for the past three months. Her blood pressure was 160/104. Immediate abdominal and vaginal examination was made, due to urgent necessity, and the patient was delivered before she could be taken to the delivery room. After the birth of the first child, the presence of the second child was discovered. There was no opportunity for previous examination, and we were unaware of the presence of twins. The patient bled very little, and there were no lacerations. It was a left occipito-anterior presentation, and heart sounds were heard in the lower left quadrant. The placenta came in fifty minutes, with a separate sac of membranes for each child, but these were greatly torn.

Placental substances had been forced, under the severe tension, into the maternal circulation. A few hours later, the patient's temperature jumped to 106.2°, pulse 150 plus, respirations 44. No urine could be obtained even by catheterization. Every effort was made to save her, but she had already experienced eleven severe convulsive seizures since her delivery 3½ hours previously, each attack lasting from two to four minutes. Rectal injections of bromid and chloral were made, 400 c.c of normal saline solution was given by hypodermoclysis, 1,000 c.c. of blood was taken by venesection, and stimulants were given. However, she developed a severe convulsion which lasted about five minutes, and then rapidly sank, expiring a half-hour later. Both children lived.

In this case, the patient gave a history of early nausea and vomiting for some time preceding delivery, headache for the last three months, edema since the third month of pregnancy, slight leukorrhea, no urinalysis for the last four months, and epigastric distress for several months preceding delivery.

Case III. Mrs. E. B., of Selbyville, Delaware, aged 34 years, white, of a fairly good build, primipara, was admitted to the hospital November 29, 1925, giving a history of having had convulsions, and in a state of unconsciousness several hours previous to her admission. On admission, she appeared dazed and hysterical. She had nausea and heartburn throughout her pregnancy. For the past six weeks, there had been a persistent frequency of urination and marked nocturia, but no disturbances of vision. She apparently caught a heavy cold six days before admission, and began to have a hard cough two days later which required her to go to bed. Four days from the onset of the cold, she developed severe abdominal pain in the lower abdomen, severe headache, and heartburn. Convulsions did not develop until the day of her admission.

At this time, the fundus was midway between the umbilicus, and ensiform. The fetal heart in the right lower quadrant beat 144 times per minute. There was slight edema of the legs; the patellar reflexes were sluggish; there was no clonic contraction or Babinski sign present. The cervix was enlarged, soft, and boggy, with no dilatation. The picture was that of a seven months' pregnancy, which verified the fact that her last menstrual period was April 20, and she was not due until January 25th. Urine, on examination, was pale, clear, with a specific gravity of 1.006, acid, no sugar, a slight cloud of albumin, no acetone, and the microscope showed the presence of urates, leukocytes, hyalin casts, and much epithelium.

Under conservative treatment, the patient rallied and was discharged December 8th, at which time the urine was clear, with only a slight trace of albumin and some leukocytes. She was sent home to her physician for further treatment. However, during the following two weeks she was subject to more or less headache and a rather dull constant epigastric pain. On Christmas day, she participated in two large dinners, and soon afterwards developed convulsions. This attack came on very suddenly. She was brought back to the hospital on December 26th, sixteen days after her previous dismissal. On admission, she was quite unconscious, not in labor, with no dilatation of the cervix, urine loaded with albumin, and blood pressure 160/100. Cesarean section was advised, and performed at 10.40 a.m. A male child was delivered, weighing 3 lbs. 13 oz., without injuries. His general condition was one of marked

immaturity, and he died only eleven hours later. With the exception of a stitch abscess, the mother made a fairly prompt recovery. She was discharged on January 13th, and referred to her doctor for further care and dressing of the incision.

CASE IV. Mrs. E. D., of Stockley, Del., white, aged 26 years, was admitted to Beebe Hospital, February 6, 1926, with an epigastric pain, radiating to the right side, which had been present for five days. Her last period had occurred June 30th, and she was due April 6th. There had been no nausea or vomiting at the outset of pregnancy, in fact, no trouble whatever until Christmas, which was about seven weeks previous to her admission, when edema began. The last six days, her face and whole body had become markedly swollen; she experienced severe headache, frequent urination, and diminished output.

Shortly before admission, she was somewhat dyspneic, rather drowsy, and the epigastric pain was more severe. The urine was full of albumin, much acetone, and many hyalin casts. The blood pressure was 168/86, and there was severe headache. The leukocytes numbered 13,800, with 80 per cent polymorphonuclears. Temperature, pulse, and respiration were normal. Due to large predominance of fluid, the outline of the fundus in the abdomen was vague. The fetal heart beat of 140 could just barely be heard below and to the left of the umbilicus. No vaginal examination was made at this time. Conservative treatment was undertaken with an effort to favor elimination and clear up the edema. The patient responded fairly well to treatment, but her blood pressure remained fairly high.

On February 11th, five days after admission, she started down hill again, and the unpleasant symptoms of the toxemia reappeared with both rapidity and marked severity. The blood pressure jumped to 210/112 on February 13th, at which time the patient became drowsy and experienced several violent convulsions, entering into a comatose state. The vagina was packed in an effort to bring on labor, and the usual treatment for eclampsia was undertaken. Six hours after the packing was done, the patient was delivered of a baby boy weighing 4 lbs. 5 oz., pushing the packing ahead of him.

After this, the mother had only one convulsion, much less severe, but remained comatose for a little while longer. During this time, the pulse remained full and bounding, and there was a Cheyne-Stokes respiration. This was followed by a very nice progressive, uneventful recovery, so that by February 24th, ten days after delivery, the blood pressure was almost normal, the urine showed only slight albumin, the patient had no complaints, no headache, was out of bed, and was discharged three days later.

This was an eclampsia of the eighth month. Although the child was immature, it weighed, on discharge, 3 lbs. 11 oz., was nursing well, and was apparently in fair condition.

CASE V. Mrs. C. D., of Lewes, Delaware, 18 years of age, primipara, well built, was admitted to the hospital at 5.30 a.m. February 3, 1927, in a state of unconsciousness following several convulsive seizures. She had had an uneventful pregnancy until the last week, when she developed a frontal headache and complained of "silvery" spots dancing before her eyes. At this time she also noticed that her feet began to swell badly. On the day previous to her admission, she experienced a very severe headache, felt very nervous, and had a nosebleed. She became progressively worse, developing convulsions during the night, and lost consciousness shortly before admission. At this time her blood pressure was 130/80, temperature 97°, pulse 80, and respiration 28. The urine showed a thick cloud of albumin. Three hours after admission, an abdominal cesarean was performed, and the mother and child are both living and well at this writing. This was an eclampsia of the eighth month.

In conclusion, there are several outstanding factors to be borne in mind: (1) The necessity of routine urine examinations and the usual care, ever mindful of the possibility of this unfortunate complication. (2) Early recognition of preëclamptic stages. (3) When eclampsia is at hand, the necessity of immediate mobilization for the fight, whether conservative or radical. This means get your patient to the hospital wherever possible. (4) The more frequent and the longer the convulsions, the graver is the prognosis. (5) Overeating has a great deal to do with it in view of the fact that elimination is so important a factor. Two out of the five cases here presented developed after Christmas dinners.

In our five cases the ages were 18, 23, 25, 26, and 36. Three mothers recovered, two expired; three were eight-month cases; two at full term; two were cesarean (both mothers made a complete recovery); of the two cesarean births, one baby lived, the other died of immaturity. In the five cases, one baby was stillborn, one expired, four lived, one case was twins. There were two primiparas, and three multiparas. All five patients were women whose hair was of a blonde tinge. Does eclampsia "prefer blondes?"

In view of the fact that general anesthesia induces an increase in toxemia, we are pleased with the present strides in the use of sacral anesthetics where operative procedures are necessary.

Medical News

Deaths

HENRY H. FREUND, M.D., of Philadelphia; Jefferson Medical College, 1880; aged 70; March 26.

KIMBER C. MCWILLIAMS, M.D., of Shamokin; Jefferson Medical College, 1884; aged 69; March 13, of heart disease.

WILLIAM H. MILLER, M.D., of Berwick; Medico-Chirurgical College of Philadelphia, 1895; aged 69; recently.

ROBERT J. MURRAY, M.D., of Sewickley; Jefferson Medical College, 1867; aged 81; April 5, of angina pectoris.

ISADORE E. FREED, M.D., of Bethlehem; University of Pittsburgh School of Medicine, 1909; aged 42; March 15.

SYLVESTER C. GEARHART, M.D., of Blandburg; Jefferson Medical College, 1895; aged 59; March 18, of heart disease.

JOHN B. STINE, M.D., of Philadelphia; Jefferson Medical College, 1882; aged 65; March 11, of chronic myocarditis.

David C. Huffman, M.D., of McKeesport; Jefferson Medical College, 1866; retired; aged 83; March 29, at St. Cloud, Florida.

Benjamin L. Bitler, M.D., of Pottsgrove; Louisville Medical College, Louisville, Kentucky, 1889; aged 64; March 27.

Albert A. Seibert, M.D., of Pottsville; University of Pennsylvania School of Medicine, 1888; aged 61; March 3, of heart disease.

Carl V. Guffey, M.D., of McKeesport; University of Pittsburgh School of Medicine, 1924; aged 28; March 20, of pneumonia.

Richard R. Paxon, M.D., of Philadelphia; Hahnemann Medical College and Hospital of Philadelphia, 1896; aged 58; April 7.

John Mellor, M.D., of Philadelphia; Medico-Chirurgical College of Philadelphia, 1895; aged 57; April 6, following a year's illness.

Joseph R. Lutton, of Princeton; University of Nashville Medical Department, Nashville, Tenn., 1896; aged 54; March 2, of heart disease.

John H. Funk, M.D., of Boyertown; University of Pennsylvania School of Medicine, 1865; formerly a druggist; aged 83; March 29, of anemia.

Mrs. Charlotte Shellenberger, wife of Dr. Edward B. Shellenberger, President of the Montour County Medical Society, Danville; March 25.

Lewis W. Schnatterly, M.D., of Freeport; Western Reserve University School of Medicine, Cleveland, Ohio, 1883; aged 81; recently, at Coronado Beach, Fla.

Samuel H. Voorhees, M.D., of Peckville; University of Maryland School of Medicine and College of Physicians and Surgeons, Baltimore, 1889; aged 61; recently.

Isaac Goodman, M.D., of Scranton; Jefferson Medical College, 1893; aged 62; March 10, at the Scranton State Hospital, from injuries received in a fall.

Elmer H. Robb, M.D., of Retreat; State University of Iowa College, Iowa City, 1890; on the staff of the Retreat Mental Hospital; aged 64; March 12, of heart disease.

Albert G. Miller, M.D., of Philadelphia; University of Pennsylvania School of Medicine, 1901; formerly head of the x-ray department of Lankenau Hospital; aged 48; April 13.

Charles P. Krum, M.D., of Lebanon; University of Pennsylvania School of Medicine, 1921; aged 30; the latter part of March, following an operation for gall-bladder disease.

Wilhelmina T. Nelson, M.D., of Philadelphia; Woman's Medical College of Pennsylvania, 1891; formerly a physician at Moyamensing Prison; aged 78; March 20, of heart disease.

William R. Powell, M.D., of Philadelphia; Hahnemann Medical College and Hospital of Philadelphia, 1887; aged 63; April 15, from injuries suffered when gored by a bull on his farm.

David L. Moffet, M.D., of Philadelphia; Jefferson Medical College, 1881; formerly active in ward politics, and twice Democratic candidate for Congress; aged 68; recently, after an illness of two years.

Matthew S. Williamson, M.D., of Philadelphia; Hahnemann Medical College and Hospital of Philadelphia, 1872; son of one of the three founders of Hahnemann Medical College; aged 76; April 9, after a lingering illness.

Ira J. Dunn, M.D., of Erie; University of Pennsylvania School of Medicine, 1891; member of the American Academy of Ophthalmology and Oto-Laryngology; member of the board of corporators of the Hamot Hospital; aged 63; March 9, of heart disease.

Fannie B. Margolin, M.D., of Philadelphia; Woman's Medical College of Pennsylvania, 1912; active in many Jewish charities; retired four years ago because of illness; aged 60; April 6, committed suicide by jumping from the Delaware River Bridge.

Milton B. Hartzell, M.D., of Fayetteville; Jefferson Medical College, 1877; emeritus professor of dermatology, University of Pennsylvania School of Medicine; formerly clinical professor of dermatology, Woman's Medical College of Pennsylvania; aged 72; April 7.

G. Betton Massey, M.D., of Philadelphia; University of Pennsylvania School of Medicine, 1876; noted specialist in electrotherapeutics, and one of the founders of the American Oncologic Hospital; author of many works on the treatment of cancer; aged 70; March 29, after a short illness.

Frederick S. Kaufman, M.D., of Lebanon; University of Pennsylvania School of Medicine, 1891; eye, nose, and throat specialist for twenty-five years; served in the Legislature as a Republican Representative from Lebanon County in 1912-13; aged 58; March 28, following an operation for a perforated ulcer of the stomach.

Henry Clay Eckstein, M.D., of Philadelphia; University of Pennsylvania School of Medicine, 1862; retired medical inspector of the U. S. Navy; served in the Civil War and was in many encounters at sea, serving on board some of the most famous ships of the period, including the Monitor, first iron-clad vessel; until his retirement in 1897 he spent fifteen years afloat, and the remaining twelve years at naval stations; aged 91; April 11.

Richard J. Phillips, M.D., eye specialist, of Philadelphia; Jefferson Medical College, 1883; on the staff of the Wills Eye Hospital, 1892-95, the Presbyterian Hospital, 1895-97, Jefferson Medical College, 1900-07, the Friends Home for Children, and the Presbyterian Orphanage; author of several volumes on diseases of the eye; practiced 35 years, but was forced to retire from active practice nearly two years ago as a result of failing health; aged 66; March 30.

Carey J. Vaux, M.D., Director of Health of Pittsburgh; University of Pittsburgh School of Medicine, 1899; served with distinction in the Army Medical Corps during the World War; as Director of Public Health in Pittsburgh he instituted the practice of quarantine for pneumonia; lecturer on preventive medicine at the University of Pittsburgh for the past five years; aged 51; April 14, from peritonitis, which followed an operation for gall-bladder disease the week previous.

E. E. Montgomery, M.D., of Philadelphia; Jefferson Medical College, 1876; professor of gynecology, Medico-Chirurgical College, 1886 to 1892; professor of gynecology, Jefferson Medical College, 1892 to 1917; from 1893 to 1908, a trustee of the American Medical Association; the oldest ex-president of the Medical Society of the State of Pennsylvania at the time of his death; the first surgeon to operate at the Philadelphia Hospital with the carbolic spray, and the first to introduce the use of the silver tube in performing tracheotomy for the treatment of membranous croup; aged 77; April 17, of influenza.

Births

To Dr. and Mrs. Sherod M. Cooper, of Conshohocken, a son, recently.

To Dr. and Mrs. Edward B. Shellenberger, of Danville, a son, February 26.

To Dr. and Mrs. John P. Scott, of Philadelphia, a daughter, Frances Isabel, April 16.

To DR. AND MRS. WILLIAM D. STROUD, of Philadelphia, a son, Samuel Shober Stroud, March 26.

To MR. AND MRS. JOSEPH N. EWING, of Valley Forge, a daughter, April 13. Mrs. Ewing is the daughter of Dr. and Mrs. Thomas G. Ashton, of Wynnewood.

Marriages

DR. E. H. ADAMS, of Danville, and Miss Freda Gingher, March 9.

DR. WILLIAM F. KELLY and Miss Sarah I. Sweeney, both of Philadelphia, February 12.

DR. MASHEL F. PETTLER, of Beaver Falls, and Miss Florence A. Rosenthal, of Cleveland, March 24.

DR. J. PIERCE ROBERTS, of Shenandoah, and Miss Margaret V. Collins, of Mahanoy City, February 26.

MRS. CHRISTINA BRINTON CLAXTON, daughter of Dr. and Mrs. Louis W. Atlee, of Philadelphia, and Mr. Herbert Keith Kitson, January 14, at Bel Air, Md.

Engagements

MISS MARY EDWARDS DAVISSON, daughter of Dr. and Mrs. Alexander H. Davisson, of Philadelphia, and Mr. Garrett Berry Magens, of Cynwyd.

MISS CAROLYN HEARNE, daughter of Dr. and Mrs. Charles Sheppard Hearne, of Swarthmore, and Mr. Henry Fox Greiner, of Strafford.

Miscellaneous

THE LANCASTER MEDICAL CLUB took possession of their new home on April 1st.

DR. E. H. DICKENSHIED, of Allentown, has been confined to bed at the Sacred Heart Hospital.

DR. J. ELMER PORTER, of Pottstown, has entered the moving picture business in Baltimore, Md.

DR. D. W. SHELLEY, of Ambler, is planning to attend the Rotary Convention in Belgium this month.

DR. MARY ELIZABETH HELLER, of Williamsport, is slowly recovering from a severe illness of several weeks.

DR. CHARLES BAUM, of Philadelphia, on March 17, celebrated fifty years in the practice of medicine.

DR. HOWARD H. DRAKE, of Norristown, has recovered from a recent illness and is now recuperating in Florida.

DR. HOWARD PURSELL, of Bristol, celebrated his eightieth birthday March 23 as well as his sixtieth year in medical practice.

MORE THAN 1,500 retail druggists of twenty-six counties in Western Pennsylvania will hold a conference on May 19, at New Castle.

DURING MARCH the residents of Shenandoah inaugurated a thirty-day campaign to rid the city of its rat, mouse, and roach population.

DR. RONALD C. MOORE, of Schwenksville, is taking up the study of ophthalmology in Dr. Parker's clinic at the Wills Eye Hospital, Philadelphia.

THE WILLS EYE HOSPITAL, Philadelphia, the oldest hospital in the United States exclusively for diseases of the eye, celebrated its ninety-fourth anniversary April 2.

DR. AND MRS. FRANCIS R. PACKARD and their daughters, Ann, Elizabeth, and Frances, of Philadelphia, returned to their home the latter part of April after spending several months traveling in Europe.

AT A DINNER for 700 volunteer workers, April 21, which marked the opening of a campaign to raise $1,500,000 to enlarge the Abington Memorial Hospital, a gift of $100,000 from George W. Elkins was announced.

A JOINT MEETING of the staff of Memorial Hospital, New York City, and the Radiological Clinic of the Philadelphia General Hospital was held in the latter institution March 31, followed by a dinner at the Racquet Club.

OWING TO THE decease of the former physician, the residents of Pottsgrove (Northumberland County), with a population of about 500, desire another physician to settle there. For further information, address Mrs. C. F. Koch, Pottsgrove, Pa.

DR. JOHN L. GROH, of Lebanon, was successful in defending his suit brought by a man by the name of Gass. The case went to the jury without the defense offering any testimony. The result showed that there was no just cause for bringing suit.

DR. WILMER KRUSEN, Director of Health of Philadelphia, has accepted the presidency of the Philadelphia College of Pharmacy and Science, succeeding Rear Admiral William E. Braisted, U. S. N., retired, who resigned. Dr. Krusen will retain his position as health director, and will also remain on the Board of Trustees of Temple University.

DR. SIDNEY J. HAWLEY, for the past year assistant to Dr. Willis F. Manges, chief of the department of roentgenology at the Jefferson Hospital, has recently become a member of the staff of the Geisinger Memorial Hospital as chief of the department of roentgenology.

DR. THEODORE B. APPEL, Secretary of Health, held the second of a series of conferences with county medical directors in Harrisburg on April 18. Additional duties to be imposed upon them were outlined. These involved centralization of field activities in the various counties.

PROGRAMS HAVE BEEN issued for the meeting of the Hospital Clinical Congress of North America, to be held at the Milwaukee Auditorium, Milwaukee, Wis., June 20 to 24, inclusive. An extensive program has been arranged which should especially appeal to all physicians engaged in hospital work.

THE PENNSYLVANIA BOARD OF MEDICAL EDUCATION AND LICENSURE announces that its examinations will be held from July 5 to 9, inclusive. The written examination will be held simultaneously in Pittsburgh and Philadelphia July 5, 6, and 7, and the bedside examination in Philadelphia only, July 7, 8, and 9.

THE ST. LUKE'S HOMEOPATHIC HOSPITAL and the Children's Homeopathic Hospital, of Philadelphia, were merged on April 25, when the name was changed to St. Luke's and Children's Homeopathic Hospitals. A large addition to the present Children's Hospital will be built at 8th and Thompson Streets.

THE ANNUAL MEETING of the Bucks County Health Association was held at Doylestown, April 14. The meeting was addressed by the State Secretary of Health, Dr. Theodore B. Appel; Dr. Wilmer Krusen, Director of Health of Philadelphia; and Dr. E. W. Many, County Medical Director for Bucks County.

AT THE ANNUAL MEETING of the Abbott Laboratories held March 17, the following officers and directors were elected: President, Dr. Alfred S. Burdick; vice-presidents, E. H. Ravenscroft, Henry B. Shattuck, James W. Ranson; treasurer, C. O. Brown; secretary, S. DeWitt Clough; general counsel, Alfred W. Bays.

DR. CHARLES P. KRUM, of Lebanon, who died recently, left an estate valued at $60,000, which is to be placed in trust for his mother until after her death, at which time the Good Samaritan Hospital at Lebanon will become the beneficiary. Beds for charitable patients in the hospital wards are to be maintained out of the Krum fund.

"DR." C. P. WHITMAN, 81 years old, of Philadelphia, has been held by the Grand Jury on the charges of practicing medicine unlawfully, and obtaining money under false pretenses. He was arrested for treating

several patients with injections of a fluid he called insulin, which upon chemical examination was found to be an inert liquid.

The members of the Clearfield County Medical Society together with physicians to the number of eighty-five from all over central Pennsylvania were the guests of the staff of the Clearfield Hospital at its Sixth Annual Clinic on Wednesday, April 20. Following the combined medical and surgical clinics, the guests were served with dinner.

According to the April *Bulletin of the Pennsylvania Tuberculosis Society*, three tuberculosis hospitals will receive bequests under the will of Wm. W. Harrison, who died recently in Montgomery County. They are the Chestnut Hill Home for Consumptives, $25,000; Rush Hospital, $25,000; and White Haven Sanatorium, $20,000. Bequests were also made to a number of general hospitals.

The sixth annual clinic and banquet of the Westmoreland County Medical Society was held on May 6. Dr. Henry Christian Hersey, Professor of Theory and Practice of Physics in Harvard Medical College, and Dr. J. Stewart Rodman, Professor of Surgery at the Woman's Medical College of Pennsylvania, were the medical and surgical clinicians respectively.

The property committee of the Board of Education of Philadelphia has authorized the purchase of a site for a million-dollar school near Juniata Park, where Philadelphia's undernourished and crippled children and those suffering from tuberculosis may be educated. The building, with wing divisions, will permit the segregation of orthopedic cases from children with tuberculous ailments.

For some time a sub-committee of the Women's Auxiliary of the Germantown Hospital, Philadelphia, has been running a Benefit Shop at 157 East Chelten Avenue to help reduce the hospital's original deficit of $75,000, which was assumed six years ago. The shop is almost unique in Philadelphia, and in it may be found a variety of things from discarded bits of bric-a-brac to antiques of real value.

The following officers have been elected for the American Society for Experimental Pathology: President, Dr. David Marine, New York City; vice-president, Dr. E. B. Krumbhaar, Philadelphia; secretary, Dr. Carl V. Weller, Ann Arbor, Mich.; councilors, Drs. William F. Peterson, Chicago, Ill., and Frederick L. Gates, New York City; representative on the National Research Council, Dr. Alfred S. Warthin, Ann Arbor, Michigan.

A gift of $1,000,000 to establish a radiologic institute for the study of cancer at Washington University School of Medicine has been given by the General Education Board, the Rockefeller organization for the advancement of education, and Edward Mallinckrodt, St. Louis chemical manufacturer, and members of his family. The work will include the study of the general diagnostic and therapeutic uses of the x-ray and other more powerful rays. Approximately $250,000 will be spent for a four-story building to house the institute.

Dr. Kenneth Fowler, who recently resigned as director of the laboratories of the hospital of the University of Michigan to take charge of the department of pathology at the Geisinger Memorial Hospital, has arrived at Danville. Dr. Fowler for several years was assistant to Dr. H. Gideon Wells and was instructor in pathology in the University of Chicago. Four years ago he went to Ann Arbor to organize the clinical laboratories in the new hospital of the University of Michigan, where he was director until his recent resignation.

Dr. A. H. Harold, of Indianapolis, has recently accepted the position as Medical Director at French Lick Springs Hotel, French Lick, Indiana, succeeding Dr. Dunning Wilson, who was killed several months ago in an auto wreck in Cuba. French Lick is noted for its healthful climate and mineral waters, which attract thousands of visitors each year. The hotel, with its beautiful gardens and surroundings, is now in mid-season, with horseback riding, golf, and other recreations vying with each other in popularity.

The United States Civil Service Commission announces that hospitals of the U. S. Veterans' Bureau and the U. S. Public Health Service throughout the country are *urgently* in need of the following technicians: Senior Medical Technician (Bacteriology), Medical Technician (Bacteriology), Senior Medical Technician (Roentgenology), Medical Technician (Roentgenology). Applications will be rated as received until June 30, 1927. Full information and application blanks may be obtained from the U. S. Civil Service Commission, Washington, D. C., or the secretary of the board of United States civil service examiners at the post office or custom house in any city.

Announcements and schedules will soon be ready for the 1927 Summer Clinics of the Chicago Medical Society, supported by many of the largest hospitals in the city of Chicago and several of the large laboratories. Registration will be open to physicians from other states and to as many as may be accommodated. Registration fee will be $10 for each two-weeks' course, payable at time of registration, and a physician may register for only one course of two weeks. The first two-weeks' course will begin on Monday, June 13, at 9 a.m., ending Friday, June 24. The second two-weeks' course will begin on Monday, June 27, at 9 a.m., ending Friday, July 8. For further information, address the Chicago Medical Society, 25 East Washington Street.

The American Association for the Study of Allergy is to hold its fifth annual meeting in Washington, D. C., at the Washington Hotel, on May 16 and 17. A dinner is to be given at which Dr. Arthur F. Coca is to deliver an address on "The Pathology of Atopic Hypersensitiveness." All physicians interested in the subject of allergy are invited to attend the daily sessions and to be present at the dinner. Reservations for the dinner may be made with the Secretary, Albert H. Rowe, 242 Moss Ave., Oakland, California. A check of $4.00 for the dinner should accompany each reservation. The program covers many phases of the subject of allergy, and presents an outstanding symposium on the subject by specialists from all parts of the United States and Canada.

The following physicians took advantage of the study course in tuberculosis arranged by the Berks County Medical Society, which began April 12 and was concluded April 20: Drs. W. E. Fisher, S. J. Sondheim, W. D. Griesemer, A. P. Isenberg, Wendell Becker, F. P. Werner, D. S. Grim, and W. W. Werley, of Reading; C. F. Smith, Topton; F. P. Lytle, Birdsboro; and E. P. Steckel, Kutztown. The course was conducted by the Pennsylvania Tuberculosis Society, through Dr. W. P. Brown, Medical Secretary, and the following were lecturers: Dr. H. A. Gorman, of the Hamburg State Sanatorium; Dr. Isadore Kaufman, of Phipps Institute, Philadelphia; and Dr. Burgess Gordon, of the Jefferson Hospital, Philadelphia. The course was held at the Berks County Tuberculosis Sanatorium and its clinical material was utilized for demonstration purposes.

At the annual meeting of the Philadelphia Heart Association, April 20, it was announced by Dr. Joseph Sailer that private beneficence has now virtually arranged for the erection in Philadelphia of a 200-bed institution for the care of children suffering from heart disease. Dr. Sailer said that heretofore only thirty beds were available for the care of these children. Dr. Theodore B. Appel, Secretary of Health of Pennsylvania, outlined his hopes for the development of heart clinics all over Pennsylvania. Miss Mabel E. Crafts,

placement secretary of the Philadelphia Health Council and Tuberculosis Committee, stated that night clinics are one need in the effort to aid those suffering from heart trouble.

The following were elected officers of the Association for the ensuing year: President, Dr. Henry K. Mohler; vice-president, Dr. James E. Talley; secretary, Dr. William D. Stroud; treasurer, Morris Stroud; additional members of the board, Dr. Joseph Sailer, Dr. Edward B. Krumbhaar, Mrs. Andrew Wright Crawford, and Austin Maury.

DR. JANE SANDS, professor of physiology at the Woman's Medical College of Pennsylvania, has been awarded the Sarah Berliner Research and Lecture Scholarship through the American Association of University Women at their biennial meeting in Washington, D. C., March 31 to April 1. Dr. Sands will utilize her scholarship to continue her research, now of a year's duration, on heartbeat tracings in the embryonic heart. She is using the chick in her experiments, employing a technic which makes use of the electrocardiograph, so that the tracings made by the heartbeats are shown on a photographic film. When the research is completed, Dr. Sands hopes to have shown definitely whether the shape of the electrocardiograms remains the same for the entire period of development for the embryo, or whether there are any changes during the days and weeks when the heart develops from a simple tube into a complex organ with all its various chambers and parts. Her earliest record of the embryonic heartbeats to date was taken when the embryo was 24 hours old. Previous to her experiments the earliest recorded embryonic heartbeat was that of an embryo 52 hours old.

ORGANIZATION OF A NEW Department of Pathology coördinating teaching and research activities in pathology in the University of Pennsylvania School of Medicine has been announced. Dr. Eugene Opie, former president of the American Association of Pathologists and Bacteriologists, and now director of the laboratory of the Henry Phipps Institute, has been elected director of the department and professor of pathology. Dr. Edward B. Krumbhaar, former president of the Philadelphia Pathological Society, and director of the laboratories of the Philadelphia General Hospital, has also been elected professor of pathology, and, under the general direction of Dr. Opie, will have charge of the undergraduate teaching in the department. He will resign his position at the Philadelphia General Hospital. Dr. Herbert Fox, director of the William Pepper Laboratory of Clinical Medicine in the University of Pennsylvania Hospital, has been elected a professor of comparative pathology, and Dr. Baldwin Lucke, assistant professor of pathology in the Medical School of the University, has been elected associate professor of pathology. In addition, the following men will be on the staff of the new department: Dr. Joseph McFarland, professor of pathology; Dr. Morton McCutcheon, assistant professor of pathology; Dr. Stuart Mudd, assistant professor of experimental pathology; and Dr. Damaso Rivas, assistant professor of parasitology. Dr. Opie will continue his directorship of the pathological laboratory at the Phipps Institute, and Dr. Fox also will retain his directorship of the Pepper Laboratory of Clinical Medicine and will continue his pathological studies at the Zoölogical Gardens.

BOOK REVIEWS

From a reviewer we expect information and advice which will guide us safely and to our profit, warning us of the poor, the mediocre, the commonplace, and inviting our attention to merit.

THE SURGICAL TREATMENT OF GOITER. By Willard Bartlett, A.B., M.D. Foreword by Dr. Charles H. Mayo. 130 original illustrations. St. Louis: C. V. Mosby Company, 1926. Price, $8.50.

This is a most interesting and valuable book, one which every medical man and general surgeon should have in his library, for under the term "surgical treatment" Bartlett includes a history of the development of goiter surgery in all its branches, diagnosis, preoperative treatment, the operation itself, and a plan of meticulous after-care.

In a tribute to the author in the foreword, C. H. Mayo says: "Certainly the time has again arrived for assembling the many new truths concerning the thyroid and for showing their clinical applications. This has been so very well done by the author."

The book contains a historical and personal chapter—extremely interesting because of the author's close association with Halsted in his early work on goiter; a chapter on the pathology of goiter by L. B. Wilson; another on the heart in goiter by S. B. Grant, both excellently prepared; followed by a description of unusual types of goiter; and indication for the surgical treatment, with great stress laid upon diagnosis and modern methods now employed. This is followed by an outline of Bartlett's ideal operation for goiter, which is described in great detail, profusely illustrated, and written in a personal way which is very interesting and impressive.

The book is the best on goiter which has appeared in many years.

THE SURGICAL CLINICS OF NORTH AMERICA. Volume VI, number VI. (New Jersey Number—December, 1926). Philadelphia and London: W. B. Saunders Company.

The various hospitals of New Jersey—Newark, Atlantic City, Camden, and Jersey City—are represented by members of the staffs who contribute articles. The field of general surgery is covered and presented in a clinical manner. Especially interesting is the writing of Wells P. Eagleton on traumatic and infective lesions of the head. There are numerous illustrations throughout the book which enhance its value. An index for the entire year of 1926 is included in this issue.

A MANUAL OF PHARMACOLOGY; ITS APPLICATION TO THERAPEUTICS AND TOXICOLOGY. By Torald Sollmann, M.D., Professor of Pharmacology and Materia Medica in the School of Medicine of Western Reserve University, Cleveland. Third edition, entirely reset. 1184 pages. Philadelphia and London: W. B. Saunders Company, 1926. Price, cloth, $7.50 net.

It is impossible, in a brief review, to point out all the merits of this voluminous book, because it is full of valuable facts about the action of drugs and the proper methods of administering them to the sick. It is certainly the last word on therapeutics today, since it considers the latest advances in that science and the newest remedies, such as insulin, guanidin, ephedrin, flavin, ethylene anesthesia, etc. A very important feature is the "whys and wherefores" of the action of drugs, and the explanation of the pathologic function of the organ involved, then showing how certain drugs can modify it for the better. This is well illustrated in the chapters on the treatment of asthma, traumatic shock, fever, and anaphylaxis.

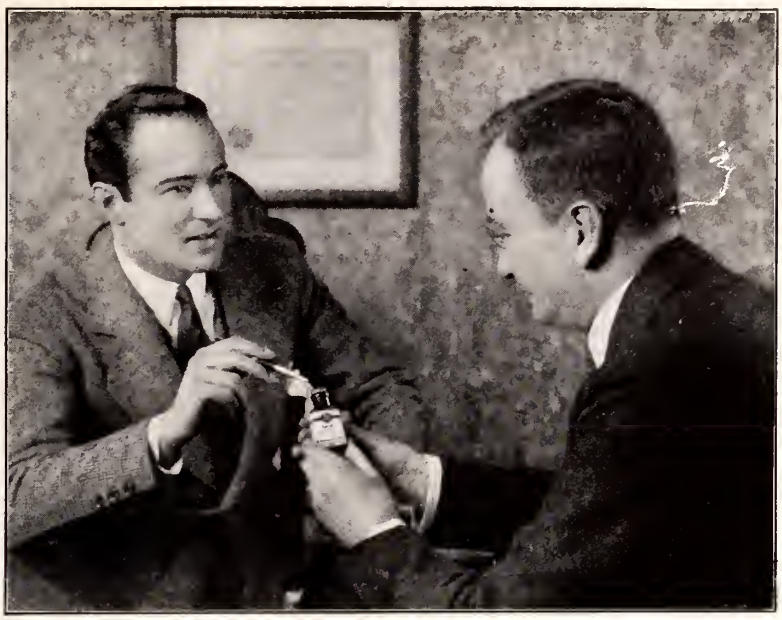
SHELL SHOCK AND ITS AFTERMATH. By Norman Fenton, Ph.D., Associate Professor of Psychology, Ohio University. Illustrated. St. Louis: The C. V. Mosby Company, 1926. Price $3.

The reviewer would have welcomed a book like this when he was called upon to teach classes of men who had suffered shock in the war, and who had failed in their work in medical schools. The book, while written in an informal, conversational style, could have been much condensed, yet contains a valuable mass of detail,

(Continued on page xvi.)



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BOOK REVIEWS

(Continued from page 546.)

chiefly derived by personal expert observation and experimentation. One may call the book a practical guide to the study of war neuroses, because of the details as to the methods of study.

It is doubtful that the distinction between shell shock due to "functional neuroses" and those of structural origin, can be maintained. In these days in which many so-called "functional neuroses" are vanishing with the growth of knowledge of obscure lesions of sinuses, tooth infection, gall-bladder, and prostate involvements, one may well question whether such a thing as "functional neuroses" apart from a positive structural basis ever exists. The problem of the "neuro" is therefore a problem for the physician and surgeon.

The book is printed in the usual excellence of the firm producing it. It is a book to be recommended to all physicians, teachers, especially of adolescent and adult, psychologists, and physiologists. Lastly, the general reading public would profit by its perusal and secure a sympathy with the "neuros" which we have with us always.

OUTLINES OF COMMON SKIN DISEASES. By T. Caspar Gilchrist, M.D., Clinical Professor of Dermatology, Johns Hopkins University. Illustrated with five full-page plates, Baltimore; Williams & Wilkins Company. Price, $1.50.

There is probably a place for this synopsis among medical students and very busy practitioners who see comparatively few examples of skin disease. The work is unique, as may be imagined when it is stated that dermatology is condensed, including the index, into fifty-four pages. The author has done well in so limited a space.

The list of aphorisms on page 46 is so useful that it might be extended.

A PRIMER FOR DIABETIC PATIENTS. By Russell M. Wilder, M.D., Section on Nutrition, Division of Medicine, Mayo Clinic. Third edition, reset. Philadelphia and London: W. B. Saunders Company, 1927. Price, $1.50 net.

This little book of 134 pages is a very handy and useful help to patient, nurse, and physician in the up-to-date, intelligent treatment of a case of diabetes. It is written in simple language that may be easily comprehended by the laity with a little explanation by the physician. It explains what diabetes is, and gives tests for sugar and diacetic acid. It covers well the weighing of foods, food scales, the metric system of weights and measures, fuel value and the composition of food, and planning diets for diabetic patients. Insulin and its use, and the treatment of complications in diabetes are clearly presented.

The book contains two charts for the determination of the maintenance diet and for the appropriate distribution of the total food calories between carbohydrate, protein, and fat.

THE MODERN PRACTICE OF PEDIATRICS. By William Palmer Lucas, M.D., LL.D., Professor of Pediatrics, University of California Medical School; Physician-in-Chief, Children's Department, University of California Hospital; etc. New York: The Macmillan Company, 1927.

While it hardly seems possible there could be either need or space for a new textbook devoted to pediatrics, and surely no newer or better ways of getting one out than those already in existence, this book can undoubtedly claim much that, while not necessarily new, is decidedly different, and therefore has a place in pediatric literature that should make it appeal to all interested in that subject. The author's method of following every chapter with what he calls "Reference Readings" is valuable, not only for reference purposes, but, in addi-

(Continued on page xviii.)

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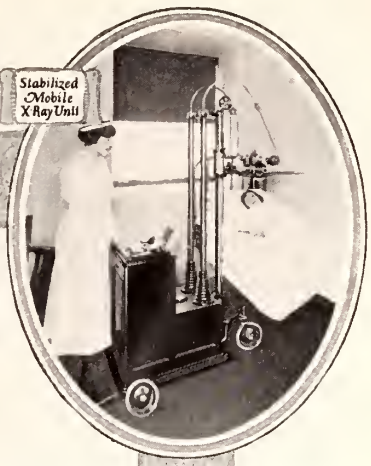
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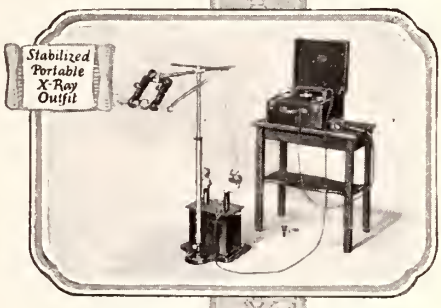
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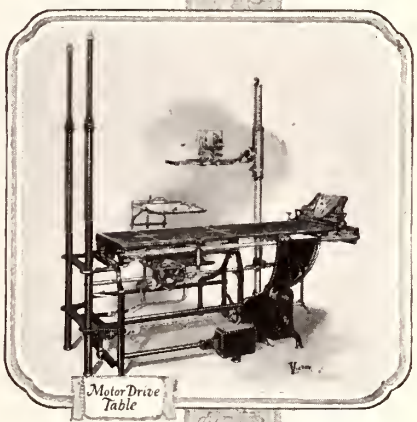
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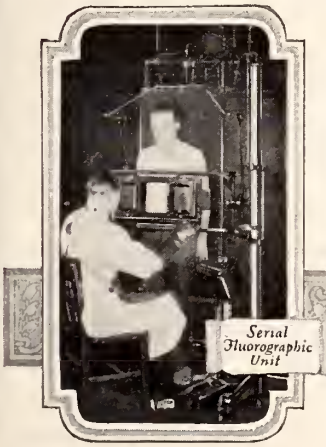
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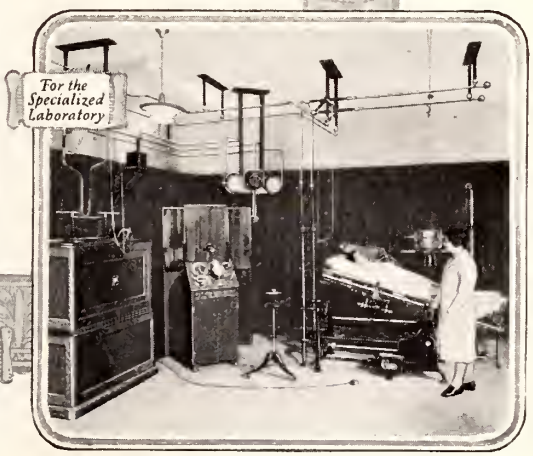
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BOOK REVIEWS

(Continued from page xvi.)

tion, gives one an easy means of obtaining and locating much collateral reading that would in many cases require much time and patience to become otherwise available.

While one finds in the pages of this book much to commend, and nothing to criticize adversely, one cannot help but at least question some of the statements in the chapter on "Artificial Feeding of Infants," particularly concerning the amount of food to be given at a feeding at different ages. The statement is made that "by the end of the first week, from 2 to 3 ounces will be taken at a feeding; by the end of the first month, 3 to 4 ounces at a feeding; by the fourth month, 6 ounces." This not only does not agree with the experience of the authors of most, if not all, textbooks on pediatrics, but has surely not been the experience of the reviewer. Regardless of how normal the infant may be, and of what ingredients the food may be composed, one would hardly feel justified in giving any such quantities at such ages, merely because the baby will take it, as he not only cannot possibly need it, but equally surely, could not digest and assimilate any such amounts.

In spite of this unfavorable comment on one chapter in the book, one's library, especially that of a pediatrist, would be materially enriched by the possession of this volume.

A MANUAL OF PROCTOLOGY. By T. Chittenden Hill, Ph.B., M.D., F.A.C.S., Instructor in Proctology, Harvard Graduate School of Medicine; Surgeon to Rectal Department, Boston Dispensary. Second edition, thoroughly revised. Illustrated with 101 engravings. Philadelphia and New York: Lea & Febiger, 1926. Price, $3.50.

There is very little change in verbiage in the subject matter over the first edition, except that, in the last chapter on operative treatment of carcinoma, the operation as devised by Coffey, of Portland, has been substituted for the operation as devised by Miles, of London. This is a very good substitution. The illustrations are identical with the previous book, except in the last chapter. In illustration 31, the operation for posterior horseshoe abscess would give one the wrong impression in regard to a possible incontinence occurring later. Figure 46, used in the previous edition, is confusing, as it gives the impression that an external hemorrhoid is being injected with quinin and urea-hydrochlorid solution, which naturally is inadvisable.

There have been added various prescriptions; otherwise the book is essentially the same as the earlier edition. It is a very readable, concise, and well-handled volume, and should be of special value to the student and general practitioner.

THE DISEASES OF INFANTS AND CHILDREN. By J. P. Crozer Griffith, M.D., Ph.D., Professor of Pediatrics in the Graduate School of Medicine of the University of Pennsylvania, and A. Graeme Mitchell, M.D., B. K. Rachford Professor of Pediatrics, College of Medicine, University of Cincinnati. Second edition, reset, with 461 illustrations, including 20 plates in colors. Two volumes. Philadelphia and London: W. B. Saunders Company, 1927. Price, cloth, $20 net.

The fact that the first edition of this excellent contribution to medical and particularly to pediatric literature is already exhausted, making a second edition necessary at this time, is not surprising to one who had the opportunity of using a copy of the first edition, as it was only to be expected that, as the authors state, "the appearance of very many additions to our knowledge of pediatrics" would make a second addition necessary in order to bring the subject up-to-date.

The contents of these two volumes is classified into two divisions. Division 1, entitled "General Subjects,"

(Continued on page xx.)

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BOOK REVIEWS

(Continued from page xviii.)

and three sections of division 2 ("Diseases of the Newborn," "Infectious Diseases," and "General Nutritional and Miscellaneous Diseases") are found in Volume 1, and nine more sections constitute the second volume. The fact that the two volumes contain 461 illustrations, including 20 plates in colors, shows how well both books are illustrated. The value of this is well known to those who have occasion to consult such textbooks—which really means all practicing physicians, and not merely those interested only in pediatrics.

While the authors state their intention to make the book "as complete as seemed desirable without attempting to make it encyclopedic," they have barely escaped doing so, especially in view of their method of giving the dates and places of publication of every reference contained in their text. This enables one to find readily the articles published in full to which only references have been made, or from which quotations have been taken, should he desire to familiarize himself more fully with the subject under discussion. The giving of brief synopses of the history of cases reported increases their value materially, and the numerous cross references enable one to gather promptly all the information and knowledge that exists on the subject under discussion.

It is surely not too much to say that no physician's library, be he pediatrist, general practitioner, or specialist in almost any line dealing with children, sick or well, would be complete without these two books, whether one intended to use them for reference, as collateral reading, or for general information.

INTERNATIONAL CLINICS. By leading members of the medical profession throughout the world. Edited by Henry W. Cattell, A.M., M.D., Philadelphia. Volume I. Thirty-seventh Series, 1927. J. B. Lippincott Company, Philadelphia and London.

A good variety of subjects is presented in this issue, including clinics by Lewellys F. Barker in medicine. Brooke M. Anspach in gynecology, and by Dean Lewis. There is a good article on "Endocarditis Lenta" by Matti, of Geneva, and a timely article on "Thoracoplasty" by Sauerbruch, of Munich, makes good reading. A review of the progress of medicine for 1926, comprising eighty-three pages, is well worth perusing. The illustrations are good and the typography up to its usual standard.

THE SPECIALTIES IN GENERAL PRACTICE. Compiled by Francis W. Palfrey, M.D., Instructor in Medicine at Harvard University. Pages 1 to 748, inclusive. W. B. Saunders Company, Philadelphia and London, 1927. Price, $6.50 net.

This work is a compilation by Palfrey covering the specialties and surgery, but for some unknown reason fails to include medicine. A few glaring errors in typography are surprising, as the entire work comes from the medical school of Harvard University. The chapters on "Ophthalmology" and "Psychiatry" are good. The work will be of value to Harvard students.

LOCAL IMMUNIZATION, SPECIFIC DRESSINGS. By Professor A. Besredka, Pasteur Institute, Paris. Edited and translated by Dr. Harry Plotz, Pasteur Institute, Paris. Pp. 216. Baltimore: The Williams & Wilkins Co., 1927. Price $3.50.

This translation of the monograph of the father of the sensitized bacterins makes it possible for us to review quite easily his work on local immunization, begun before the World War and only recently completed.

A new theory of immunity is introduced. Briefly stated, skin and mucosæ are receptive or responsive to infections, all infection taking place through the

(Continued on page xxii.)

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BOOK REVIEWS

(Continued from page xx.)

same. The reticulo-endothelial layer is either naturally or artificially immune—or susceptible in that here only nonaffinity or affinity for the organism is shown. When no affinity is present, cells of this layer fail to recognize the organism; it passes into the general lymph or blood and is phagocytosed by the polynuclears which are attracted by positive chemotaxis. On the other hand, if there be affinity for the organism at the periphery, it is phagocytosed first by the reticulo-endothelium which apparently liberates from the disintegrating bacteria substances which repel the leukocytes. This negative chemotaxis paralyzes the polys and allows the organism to pullulate in great numbers to the detriment or even destruction of the host.

The theory is fascinating, but fails to mention the work of Bail regarding just such an inhibiting substance "agressin," produced by bacteria of virulent nature.

The new theory is ingeniously introduced to explain immunities brought about by the cutaneous or mucosal application of filtered cultures containing "antivirus." Immunities all take place by immunizing skin or mucosæ; hence, the superficial application of dead cultures per os, by dressings, or scarifications, rather than by the needle.

Experimental work on animals by this procedure in anthrax immunization is cited. Staphylococcus, streptococcus, dysentery, typhoid, and paratyphoid immunization in animals and man are performed by dermal or mucosal applications of dead or filtered cultures, rather than by injections through the skin. Dead cultures of typhoid, para A and B, dysentery, and cholera, given by the mouth, apparently produce a "more solid and lasting immunity than when given subcutaneously."

The monograph is well written, and historical data and previous theories of immunity are traced to the works of Pasteur, Koch, Metchnikoff, Bordet, Ehrlich, and many of the more recent pioneers. The work is extremely interesting, but apparently only cases of favorable termination are cited, probably for lack of space. This gives the reader the impression that results are always 100 per cent good, a conclusion apt to incur distrust in the work and to ruin one's enthusiasm. The work should stimulate collaboration, to say the least.

TRANSACTIONS OF THE AMERICAN PROCTOLOGIC SOCIETY, twenty-seventh annual session, held at Indianapolis, Indiana, April 16 and 17, 1926. Owatonna, Minn.: Journal-Chronicle Company, 1926.

These transactions are made up of the presidential address and fifteen articles on various aspects of proctology. The most interesting articles are possibly "The Rôle of Infections in Proctology" and "Rectal Pathology Caused by Syphilis." Throughout the transactions, however, there is very little that is either new or striking. The review of the proctologic literature for the preceding year emphasizes the paucity of the contributions. The paper is excellent and the printing good.

DISEASES OF THE HEART. By Dr. Henri Vaquez, Professor of the Faculty of Medicine of Paris. Translated and edited by George F. Laidlaw, M.D., Associate Physician to the Fifth Avenue Hospital, New York City. Introduction by William S. Thayer, M.D., Professor Emeritus of Medicine, Johns Hopkins University. Pp. 743. Philadelphia: W. B. Saunders Co., 1925.

There are few if any men living so well qualified as Vaquez to write a book on diseases of the heart. He has a distinguished record as an investigator of circulatory diseases, and he is generally conceded to be one of the great clinicians of the world. From his

(Concluded on page xxiv.)

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BOOK REVIEWS

(Concluded from page xxii.)

rich experience he has written a book on heart diseases for the general practitioner that deserves to and doubtless will be regarded as a classic.

The subject matter is divided into five parts; namely, (1) Methods of Examination, (2) The Cardiopathies and Arterial Hypertension (3) The Arhythmias, (4) Heart Failure, and (5) Treatment. There are in all 42 chapters including, separate chapters on Radiology, Electrocardiography, Congenital Diseases, Syphilis, Tumors, Angina Pectoris, Hypertension, and Thrombosis of the Coronary Arteries. All phases of the subject are as adequately treated from the viewpoint of the practitioner as may reasonably be expected in a work of this size.

That the author is familiar with the worth-while literature not only of his own country, but also that written in other languages, is evidenced by his citations of English, American, and German contributions. There are few points in cardiology concerning which he has not been able to arrive at opinions of his own which he does not hesitate to express. This independent viewpoint is not one of the least of the book's great attractions.

There are many statements made that will not find general acceptance. This much is true of every medical book in which personal opinion is freely expressed. A number of things are said which the best available evidence does not support. Most disagreement will be lodged against the sections dealing with therapeutics. The author asks us to remember the words of Ambroise Paré: "Before condemning the old man, see if what he says is not true." To this much respect Vaquez is justly entitled.

The translation and editing of the book from the French has been excellently done by Dr. Laidlaw.

A MANUAL IN PRELIMINARY DIETETICS. By Maude A. Perry, B.Sc., Director of Dietetics, The Montreal General Hospital, Montreal, Canada. St. Louis: C. V. Mosby Company, 1926. Price, $1.25.

This is a well-written, conveniently arranged little book, particularly useful to the student nurse, and it affords a simple, easy method for refreshing the memory of the graduate nurse who has been out of touch for some time with this branch of her work.

CHININUM. A collection of papers concerning the use of quinin, quinidin, and other quina alkaloids. Prepared by the Bureau for Increasing the Use of Quinine, Amsterdam.

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STUDIES IN IMMUNOLOGY IN RELATION TO OPHTHALMOLOGY*†

First Communication: Outline of Diagnosis and Biologic Therapy, With Special Reference to Lens Antigen in Diagnosis and Treatment and Serum Therapy

CONRAD BERENS, M.D., RAY R. LOSEY, M.D., LE GRAND H. HARDY, M.D., AND RAYMOND E. MEEK, M.D.
NEW YORK, N. Y.

Immunology is such a broad subject that in a paper of this length one may select and present only a few of the outstanding points in a special field. One of the difficulties in presentation is our ignorance in regard to some of the underlying factors producing the specific and nonspecific reactions to biologic therapeutic agents. Probably the greatest difficulty is our lack of means for determining the value of any specific or nonspecific remedy. In the study of infections this is particularly difficult because some of the diseases cannot be transmitted to lower animals, and in those diseases which can be transmitted there is always the variable factor of the resistance of the animal to disease and the fact that many, if not all, of the diseases tend to spontaneous cure. This means that all experimentally produced immunity is variable, and that present judgment in regard to the efficacy of any biologic therapeutic agent must be determined by the observation of the clinician. This paper deals with the effects of parenterally administered biologic products given with the purpose of modifying ocular diseases or remote pathologic conditions resulting in ocular dysfunction.

Biologic therapy may be specific or nonspecific. Before proceeding with the discussion, we should realize that all so-called specific therapy is not purely specific in the sense that Wright first believed, and that the effects produced by nonspecific protein agents may also be produced by nonprotein substances. These statements, made in the light of our present knowledge of the subject, which is rapidly changing from day to day, cannot be considered final. Biologic truths are only approximations, and in this study the truths of yesterday are the errors of today and the truths of today are the errors of tomorrow.

Although the history of this subject and the discussion of many theoretic phases is of the greatest interest, we shall limit our discussion of the subject so far as possible to the treatment of the various eye diseases in which protein therapy has been used. We consider the question of accurate diagnosis of the utmost importance, before using biologic therapy, so we have stressed the diagnostic points whenever this has been possible.

SPECIFIC PROTEIN THERAPY

DIAGNOSTIC USE OF LENS ANTIGEN

That lens substance is tissue specific, as suggested by the work of Uhlenhuth[1] in 1903, is questioned by the recent work of Kodama[2], and this point requires further experimental investigation. We believe, however, from clinical observation that a patient may become sensitive to his own lens protein, which hypersensitiveness may be determined by testing his intradermal sensitivity with foreign lens protein from a lower animal. Two of our patients who were hypersensitive to intradermal tests with lens protein had been operated on previously, and both had had severe reactions.

Verhoeff and Lemoine[3, 4] were the first to suggest that allergic inflammation of the eye might result from hypersensitiveness to lens protein, and they proposed the name of "endophthalmitis phacoanaphylactica." Harold Gifford[5] and Sanford R. Gifford[6] have apparently demonstrated that cataractous lens substance is more toxic than normal lens substance and that reactions from retained cortex are not always allergic. They, therefore, prefer the term originally suggested by Straub, "endophthalmitis phacogenetica," as more accurately describing this group of cases. We have recently seen one patient whose eye became violently inflamed after his lens was needled, and this inflammation subsided as soon as the soft lens became absorbed. At

* Read before the Section on Eye, Ear, Nose and Throat Diseases of the Medical Society of the State of Pennsylvania, Philadelphia Session, October 13, 1926.
† From The Eno Laboratory, New York Eye and Ear Infirmary, New York City, N. Y.

no time during his convalescence did he exhibit the slightest hypersensitiveness to lens protein.

We agree with Verhoeff[7] that "the negative evidence presented by Rötth[8] as to the existence of endophthalmitis phacoanaphylactica is entirely unconvincing," and we present a tabulation of patients tested (Table 1), in the belief that some of them were hypersensitive to homologous as well as heterologous lens protein.

eye, developed the same reaction in the other eye. An intradermal test showed extreme hypersensitiveness. Desensitizing injections were used and the eye quieted rapidly, but the final result was detachment of the retina. It is of interest to note that the patients with mature cataracts had marked chronic infection in their sinuses, and that the boy had diseased tonsils. The rôle of focal infections in complicating

TABLE 1

RESULTS OF INTRADERMAL TESTS WITH LENS ANTIGEN

Number of Cases	*Diagnosis*	*Sensitivity*
14	Immature cataracts	Negative
2	Traumatic cataracts	Negative
2	Diabetic cataracts	Negative
7	Secondary cataracts	Negative

Name	*Age*	*Diagnosis*	*Sensitivity*	*Treatment*	*Results*
Mrs. J. M. ...	45	Secondary cataract O.U. degenerated vitreous. Chorioret. Detached ret. O.D. 2 mos. after operation.	Not tested until second eye inflamed.	Desensitized and eye quieted after second eye operated on and intrader. test positive.	First eye operated on, eye red four mos. Second eye became infl. and lens protein given, eye quieted but retina became detached.
Mr. E. W. ..	13	Zonular cataract O.U.	.....	Injections for 5 weeks, 3 times a week. Mulford's lens antigen used.	Ziegler operation thru-and-thru discission. No reaction for one mo., but became intrad. sen.
Mrs. T. W. .	65	Secondary cataract O.S. Sinusitis. Retrobul. neur. O.D.	.....	Desensitized with lens antigen.	Cataract extract. after preliminary iridectomy with capsulectomy. Uneventful recovery. Reads J., No. 1.
Summary of 28 cases		All cataracts five types.	3 positive	Two desensitized prior to operation.	Two desensitized before operation, no reaction. One positive, not desensitized, result: detached retina.

LENS ANTIGEN IN TREATMENT

Desensitization Before and After Cataract Operations. Patients who have shown positive skin reaction before operation have been desensitized. Two patients, one a boy of eleven years with congenital cataract who was not very sensitive, and a woman with so-called "senile cataract" who was extremely sensitive, were operated upon. The patient with senile cataract had an uneventful recovery, but the patient with zonular cataract developed intradermal hypersensitiveness coincident with inflammatory attacks in his eyes. Desensitizing injections were used, and the eye finally quieted. The operation on the boy was a through-and-through Ziegler capsulotomy, and the senile cataracts were expressed after capsulectomy. One patient, a woman of fifty who had had a prolonged low-grade iridocyclitis following operation on one other allergic diseases has been pointed out, and the importance of using vaccines and eliminating foci of infection in patients who are sensitive to lens protein suggests itself from our experience in these three cases.

Treatment of Cataract with Lens Antigen. Specific therapy with lens antigen was first used by Römer[9] in 1908 for the treatment of patients with cataract. In 1922, A. E. Davis[10] published his researches and experiences in the treatment of cataract with antilens serum and lens antigen, and concluded that immature cataracts may be arrested in 90 per cent of the cases in which there is 50 per cent loss of function. These figures are interesting, but Jackson's[11] statistical study of his cases treated by hygienic measures alone, makes us conservative in evaluating results of lens-antigen treatment. Jackson has shown that patients averaging 65.35 years who

have commencing senile cataract will live, on an average, 15 years before they will be unable to read fine print. We believe lens-antigen treatment should be tried by a group of observers, even though its effect may not be specific. It apparently does no harm, and nonspecifically may raise cell resistance which may retard the progress of cataract, if cataracts are due to toxins as originally suggested by Römer's[12] ex-

Table 2

Results of Lens-Antigen Treatment of Cataract

Case No., Initials and Diagnosis	*Date of First Treatment and Vision*	*Total Quantity Injected and Number of Injections*	*Vision and Date of Last Examination*	*Remarks*
No. 1, Mr. V. Immature cataract	11-4-25 V. c.c. O.D. aphacic O.S. 20/30	Injections twice weekly. About 80 injections, totaling 500 c.c.	9-17-26 V. O.D. aphacic O.S. 20/50+3	Peripheral change. Apparently improved. Nuclear changes more marked. Vision failed.
No. 2, Mr. G. G. Immature cataract	12-18-25 V. c.c. O.D. 20/30 O.S. 20/100	Injections twice weekly. Eighty injections, totaling 500 c.c.	9-17-26 V. c.c. O.D. 20/50 O.S. 15/200	Lens opacities increased. Vision decreased.
No. 3, Mrs. Y. Immature cataract and glaucoma	2-9-25 V. O.D. no light O.S. 20/200	Injections twice weekly. About 70 injections, totaling 450 c.c.	10-1-26 V. O.D. no light O.S. fingers, one foot.	Cataracts complicated by glaucoma. Vision decreased.
No. 4, Mr. C. F. Immature cataract	1-25-26 V. c.c. O.D. 20/40 O.S. 20/70	Three injections a week. Eighty injections, totaling 500 c.c.	9-18-26 V. c.c. O.D. 20/50 O.S. 20/100	Lens opacities increased. Vision decreased.
No. 5, Mrs. B. Immature cataract	2-1-26 V. c.c. O.D. 20/200 O.S. 20/30	Three injections a week. About 80 injections, totaling 500 c.c.	10-2-26 V. c.c. O.D. 18/200 O.S 20/40+1	Lens opacities increased. Vision decreased.
No. 6, Mr. A. V. Immature cataract	12-17-25 V. c.c. O.D. 20/50 O.S. 20/40	Three injections a week. About 105 injections, totaling 700 c.c.	10-2-26 V. c.c. O.D. 20/50 O.S. 20/70	Apparently no change in O.D. Lenticular opacities increased in O.S.
No. 7, Mr. J. R. Mature cataract O.D. Immature cataract O.S.	12-19-25 V. c.c. O.D. light perception. O.S. 20/30	Three injections a week. About 100 injections, totaling 650 c.c.	9-28-26 V. O.D. light perception. O.S. 20/30	Apparently no change in either eye.
No. 8, Mr. A. K. Immature cataract	2-21-26 V. O.D. 20/20 O.S. 20/50	Three injections a week. About 100 injections, totaling 500 c.c.	9-28-26 V. c.c. O.D. 20/30 O.S. 20/50	Lens opacities increased. Vision decreased.
No. 8, Mr. H. C. Immature cataract	11-7-25 V. O.D. 20/70 O.S. 20/30	Three injections a week. About 110 injections, totaling 530 c.c.	10-5-26 V. c.c. O.D. 20/100 O.S. 20/40	Lens opacities increased. Vision decreased.

perimental studies. We have used lens antigen and dionin in the treatment of nine cases tabulated in table 2. In one case there was no increase in the lens opacities and the vision was unchanged, but in the other eight cases the lens opacities increased and vision decreased.

Too few cases have been treated by us with lens antigen to draw definite conclusions, but it is suggestive of the possibility that dionin and lens antigen have little effect in arresting the progress of lens changes in the absence of thorough medical diagnosis and treatment.

Uveal Pigment in Diagnosis and Treatment

The belief that sympathetic ophthalmia is an allergic reaction, is based upon the hypothesis that a disease in one eye may sensitize the other through entrance into the circulation of albuminous substances.[13] We cannot enter here into the various objections which have been raised against this theory.[14, 15, 16] We shall mention only the fact that the foundation of Elschnig's theory, that the action of the antibodies of the uvea and cornea are not species, but organ specific, has not been proved beyond question.[17] The anaphylactogenic activity of the purest possible uveal extracts or uveal pigment has not been demonstrated with certainty.[18, 19] Another, and probably the most important point against the allergic origin of sympathetic ophthalmia is the fact that anaphylactic inflammation of the eye is not pathologically the same as sympathetic ophthalmia, as the former affects the

retina more than the choroid and the latter is practically limited to the choroid.[20] This subject has been studied for ten years by A. Woods.[21, 22, 23, 24] He agrees with Elschnig that uveal pigment is organ specific, after studying the complement-fixation reaction in immunized animals.

Uveal Pigment in Diagnosis. The complement-fixation test for uveal pigment described by Woods[25] in 1917 and modified in 1921[26] has been discarded by him as impractical except for research work, and the intracutaneous test for pigment hypersensitivity substituted. The normal suspension, as originally suggested by Woods[25], has been made for us by the research laboratory of Parke, Davis & Co. Eighteen tests have been made (see table 3) with negative results, which should be expected if Woods' findings are correct, as no case presented signs of sympathetic inflammation.

The Therapeutic Use of Uveal Pigment in the Prevention and Cure of Sympathetic Ophthalmia. Woods and Knapp[24] were the first to treat sympathetic ophthalmia by desensitizing injections of uveal pigment in patients showing increased intradermal sensitivity. They have treated five patients with desensitizing injections, and their results were encouraging, but as yet they do not wish to draw conclusions. We have had no experience with desensitizing injections.

If sympathetic inflammation is due to an infection, as some believe, nonspecific protein therapy may prove as beneficial as uveal-pigment injections, and Verhoeff[27] has apparently had good results with nonspecific treatment.

ORGANOTHERAPY

Before considering serum therapy, it is possible that we should briefly mention organotherapy. We realize that organotherapy is based upon the supposition that disease results from the insufficiency or excess of one or more of the substances produced by the glands of internal secretion.

The ophthalmologist is probably most frequently consulted because of disturbances due to malfunction of the thyroid and the pituitary body. The entire subject of treatment is made extremely difficult by the fact that hyperfunction of one gland may possibly be caused by the hypofunction of another; and further, the dysfunction is not limited to one gland, but several glands are usually affected. We are convinced that this form of therapy should be, if possible, in the hands of those who are making this their special study, for until more accurate information in regard to diagnosis and the use of this type of therapy is at hand, more harm than good may be done by the average ophthalmologist.

Table 3

Tests of Intradermal Sensitivity with Uveal Pigment

Diagnosis	Number of Cases	Results of Intradermal Tests	Remarks
Penetrating wound of eyeball	4	Negative	
Intra-ocular F.B. .	7	Negative	
Contusion of eyeball	1	Negative	
Rupture of eyeball	1	Negative	Control test positive.
Iridocyclitis	2	Negative	
Retinitis pigmentosa	1	Negative	
Normal eyes; no complaint	2	Negative	
Summary	18	All negative	No case developed signs of sympathetic irritation.

PASSIVE IMMUNIZATION BY SERA IN THE PROPHYLAXIS AND TREATMENT OF DISEASES OF THE EYE

Passive immunization by means of sera may be either antitoxic or antibacterial, and the former will be considered first. This type of passive immunity is due to the presence of antitoxins which neutralize the true extracellular toxins. The two sera most commonly used by ophthalmologists are tetanus and diphtheria antitoxins.

Antibacterial Immune Sera

This type of immunity is affected mainly by bacteriotropins (immune opsonins) which lower the resistance of the bacteria, facilitating phagocytosis. The bacteriolysins destroy bacteria if the proper complements are present. It is probable that other antibodies aid in the fight against infection; for instance, the agglutinins and antiaggresins. The former aid bacteriolysis; the latter, phagocytosis. The most commonly employed sera in this group are the antipneumococcus, antistreptococcus, antigonococcus, and antimeningococcus sera.

In active immunization our own body cells are stimulated to the production of antibodies by the introduction of vaccines containing the antigen of the disease in a modified form. In this treatment the bodily resistance must be sufficiently high to produce antibodies, for if the cells are so exhausted that they cannot react, the introduction of the antigen may then do harm, and is certainly of no value. In passive immunization we have a different problem, for here the cells of our own body do not produce the antibody, but antibodies formed by some other animal, usually a horse, are introduced into the

human body to aid in the fight against infection. Sera of this character are particularly valuable to protect us against a disease whenever there is insufficient time for our own cells to produce antibodies. When we use immune sera we are also employing a foreign protein, so we must always consider the possibility of a nonspecific reaction in addition to the specific factor that this type of immunization will produce. For preventing disease, active immunization is to be preferred, but in acute infection, passive immunization is probably the method of choice, for the immunity is quickly produced and possibly does not tax the body cells so greatly as active immunization does, although this type of immunity is not so lasting.

Method of Administration and Dangers of Serum Therapy. Although serum sickness is fairly common and the symptoms are unpleasant, a true severe allergic reaction rarely occurs. It may be avoided by making a preliminary intracutaneous test, and withholding injections of sera, particularly intravenous injections, from patients who suffer with asthma or hay fever or who give a history of hypersensitiveness to any of the proteins. In ophthalmology, in addition to the usual methods of administration of sera, they may be applied locally to the conjunctiva or injected into the anterior chamber. The latter method of injecting serum is a rational procedure, for it has been shown that antibodies are not normally found in the aqueous in large quantities, unless there has been an injury or operation permitting the escape of aqueous fluid.

Diphtheria Antitoxin. As every physician is familiar with the methods of administration and the value of diphtheria antitoxin, only one or two points need to be emphasized here. It is not necessary to wait for a positive bacteriologic diagnosis, for the administration of the serum is practically without danger. Furthermore, the first dose should, if possible, be large enough to neutralize the toxin, and even in an extremely small diphtheritic lesion of the conjunctiva, seen on the first day, a dose of 5,000 to 10,000 units should be given. If the disease is advanced or is not seen until the third or fourth day, 10,000 to 20,000 units should be given for the first dose. If no improvement is seen in 24 hours, 20,000 to 30,000 units should be administered. The serum may also be instilled into the eye, but it should be diluted with three or four parts of sterile normal salt solution to decrease the reaction from the preservative in the serum, unless serum can be obtained to which a preservative has not been added.

Antipneumococcus Serum. When Römer first used antipneumococcus serum in the treatment of ulcers of the cornea, the various types of pneumococci had not been differentiated. This may account for his variable results and for the fact that his results were not confirmed by others. He injected 10 c.c. of the serum intramuscularly every day, and gave pneumococcic vaccines at the same time, to produce active as well as passive immunity. In the light of our present knowledge in regard to the value of the various types of antipneumococcus serum in pneumonia and the value of nonspecific protein therapy, it is probable that the beneficial results obtained were due in great measure to the nonspecific protein injections. It is possible, according to present opinion, that 20 or 30 c.c. of type-1 pneumococcus serum injected intramuscularly may be of value in prophylactic immunization where intra-ocular operation must be done immediately in patients having chronic pneumococcic conjunctivitis, or after a penetrating wound of the eyeball as a means of prophylaxis. We know, however, that the pneumococci usually found in the conjunctiva belong to type 4, and as a rule, are nonvirulent. In panophthalmitis, ulcers of the cornea, and iritis due to type-1 infection, the intravenous injection of 75 or 100 c.c. of type-1 antipneumococcus serum may be of value, and is certainly indicated, since small doses of serum injected subcutaneously, as suggested by Axenfeld, would be of little value in the treatment of conjunctivitis due to the pneumococcus, except possibly as a nonspecific protein.

Serum Therapy with Antigonococcus Serum. This serum has been used in the treatment of gonorrheal iritis, and A. Knapp[28] has reported four cases treated by this method. Cure was obtained in three cases and indefinite results in one. Terrien has shown the value of this serum if injected into the anterior chamber of animals experimentally inoculated with gonococci. In the treatment of gonorrheal ophthalmia, Weeks[29] suggests the subcutaneous administration of 2.5 c.c. repeated every 48 hours. We believe that better results may be obtained by the intramuscular injection of 10 c.c. of the serum in children, and in severe involvement of the cornea and conjunctiva of adults, 100 c.c. of the serum should be given intravenously and repeated if necessary.

Tetanus Antitoxin. Tetanus is rarely seen as a complication in injuries of the eyes, but it is our practice to inject antitetanus serum in all wounds of the eye, not only for its specific, but also for its nonspecific effect. The injection may be made subcutaneously or intravenously, and the dose should vary from 500 to 1,500 units. It has been suggested that the low incidence of

sympathetic ophthalmia in the World War may have been due to the nonspecific effect of tetanus antitoxin. In the treatment of tetanus, the first dose should be given intravenously and should contain from 10,000 to 20,000 units, and at the same time an intraspinal injection of 3 to 5 c.c. of the serum should be made. It is usually necessary to repeat the intravenous and intraspinal injections.

Antistreptococcic Serum. The varying results reported from the use of this type of serum may be due to the fact that there are many pathogenic and nonpathogenic varieties of streptococci which have not yet been satisfactorily classified, nor has the relationship between pneumococci and streptococci been definitely determined. Even some of the apparent good results obtained may be due to the fact that streptococcic infections tend to end by crisis. It would seem as though the serum should be polyvalent, and should be given as early as possible in the disease in large doses of 100 c.c., preferably injected intravenously or intramuscularly, but not subcutaneously as originally suggested.

Antistreptococcus serum has been employed in the treatment of corneal ulcers due to streptococci, erysipelas of the eyelids, and orbital abscesses due to streptococci, but the results of this form of treatment have not been satisfactory. The reason for this may be that the injections were given subcutaneously, that the sera were monovalent, and that only small doses were employed.

In the light of Besredka's work on local immunity, we have used bacterial filtrates instilled into the conjunctival cul-de-sac and the nostrils where streptococci were recovered from the nasopharynx. This method of treatment has been beneficial in patients complaining of ocular symptoms which were apparently secondary to low-grade chronic infection of the mucous membrane of the nose and nasal accessory sinuses. We have treated over 100 patients by this method, and the results have been gratifying in the majority of the cases. If Besredka is correct in his experimental conclusion, we should not expect to obtain as good results from the intravenous or intramuscular injections of serum as we should from the use of bacterial filtrates locally, and streptococcus vaccine intradermally, unless the effect is entirely nonspecific. Besredka goes so far as to state that any good results obtained from the use of streptococcus vaccine administered subcutaneously, results from the traumatism of the skin or from the fact that part of the vaccine passes into the puncture wound and then into the layers of the true skin.

We are now treating a number of our patients with bacterial filtrates and intradermal injections of streptococci and staphylococci, for it has also apparently been shown that local immunity plays an important part in staphylococcus infection. We hope to report on this form of treatment in a later paper.

Antimeningococcus Serum. This serum had been extensively used since Flexner[30] produced an antimeningococcus serum which saved the lives of monkeys when injected intraspinally. The mortality, using this type of serum, has been reduced from an average of 77 per cent in nontreated cases to 30.9 per cent in 1,294 cases treated by the serum prepared in the Rockefeller Institute. That the nonspecific effects of the serum may be an important factor has been suggested by Mackenzie and Martin[31], who treated 16 acute cases with intraspinal injections of fresh sterile human serum, with a mortality of only 38 per cent.

Intravenous injections are particularly important in complications affecting the eye, and Terrien[32] treated one patient with iridochoroiditis which was not a complication of cerebrospinal meningitis. The iridochoroiditis appeared as the first symptom of a meningococcus infection, which gave no localizing symptom and was characterized by fever and disturbed digestion. The presence of a meningococcus was determined only by blood culture. Cultures of the cerebrospinal fluid were always negative.

Table 4

Intraspinal Dosage of Antimeningitic Serum (Sophian)

Age	*Dose of Antimeningitis Serum*	*Amount of Fluid Withdrawn*
One to five years	3 to 12 c.c.	12 c.c.
Five to ten years	5 to 15 c.c.	15 c.c.
Ten to fifteen years	10 to 20 c.c.	20 c.c.
Fifteen to twenty years	15 to 25 c.c.	30 c.c.
Twenty years and over	20 to 30 c.c.	40 c.c.

Netter and Debré[33] and Terrien and Bourdier[34] have noted that ocular complications from cerebrospinal meningitis have considerably diminished, and they attribute these good results to the use of antimeningococcus serum and lumbar puncture. It is important not to inject more serum intraspinally than the amount of cerebrospinal fluid that is withdrawn. The average doses, according to Sophian, to be injected intraspinally are given in table 4.

The mortality in giving monovalent sera, after determining the type of meningococcus by

an agglutination test, in a series of 90 cases reported by Gordon and Hine[35] was only 12 per cent. This serum was usually injected intraspinally every day for four days, then every other day until the patient was greatly improved.

Antilens Serum. This method of treatment of cataract has been given up by Davis for the lens-antigen treatment referred to above.

Deutschmann's Serum. This serum is obtained from animals that have been fed on living yeast cells in large quantities, and as Deutschmann's[36] serum probably owes its action to its nonspecific effect, it should therefore be considered under nonspecific treatment.

Serum in the Prophylaxis and Treatment of Gas Gangrene. Before the World War, the cause of gas gangrene was supposed to be the Bacillus aërogenes capsulatus alone, but it is now known that other spore-forming anaërobic bacilli are usually present, as B. œdematiens and B. œdematis maligni (vibrion septique). The exact type of immunity in this disease is not known, but it probably depends upon phagocytosis. For prophylaxis, 10 to 100 c.c. of a polyvalent serum should be given, half intravenously and half intramuscularly. Vincent[37] suggests the local administration of the serum around the wound to neutralize the toxins in this situation.

Serum Treatment for Hyperthyroidism. A serum prepared by Beebe[38] for the treatment of Graves's disease is made by immunizing sheep with intraperitoneal injections of extracts of human thyroid gland. The serum is supposed to act by neutralizing the toxic secretion of the thyroid gland which may be formed in this disease, but the exact action is as yet unknown. We believe it is possible that the action of this serum is mainly nonspecific and results are due to raising the patient's resistance to toxins from chronic foci of infection. In the subcutaneous doses which Beebe recommends, it is certainly not thyrotoxic or thyrolytic. He gives 0.5 c.c. for the first dose and avoids reaction; the usual dose is 1 c.c. This serum is not so popular as it was formerly, for it is now realized that it may also cause destruction of the cells of other organs.

Serum Treatment in Tumors. Some physicians have believed that there is a natural immunity accompanying neoplasms occurring in animals, and that tumors which affect one species of mice cannot be transmitted to another species. Of the greatest importance in relation to serum therapy is the fact that active immunity may be induced in mice and rats, and it has been shown by Bashford[39] that the immunity produced by the injection of cells from malignant tumors was nonspecific; for example, mice inoculated with one strain of cancer tissue were rendered somewhat immune to the injection of a second or different strain. It is now known that immunity against tumors can be produced by injections of normal cells of the liver and other tissues. In spite of the splendid work that has been done in the experimental study of immunity to cancer, the recent meeting of the International Association for the Control of Cancer has definitely shown that the greatest hope in treatment lies in early diagnosis, early surgical intervention, and the employment of roentgen rays and radium.

Serum Prophylaxis and Treatment of Syphilis. Several investigators, notably Finger and Landsteiner[40] and Neisser and Bruck[41], have been unable to produce immune sera which were of value, either *in vitro* or *in vivo,* against spirochetes. Immunologists have concluded that, both experimentally in animals and in human beings, the antibodies are produced in such small quantities that they can be of no real value in the serum treatment or prophylaxis of syphilis.

CONCLUSIONS

1. Human hypersensitiveness to proteins may be an inherited characteristic against which true immunity is not developed. Therefore, desensitization must be repeated at times unless contact with the allergen can be avoided.

2. Lens antigen is of value in the differential diagnosis of the postoperative and posttraumatic causes of inflammatory reaction, in selecting the type of cataract operation to be employed, and in noting the effect of desensitizing injections.

3. Lens antigen and dionin are of doubtful value in the treatment of cataracts when general medical treatment is neglected. If lens antigen has any beneficial effect on the progress of lens changes, it is probably through the nonspecific action in raising cell resistance to toxins.

4. In the administration of specific sera, the nonspecific effect is important, and should always be considered in studying results of treatment.

5. From clinical experience in treating allergic diseases complicated by focal infections, it seems to be rational therapy to raise resistance to these infections by vaccines or to eliminate them whenever advisable, even though the exact manner in which they sensitize the patient is not definitely known.

6. The best results from specific and nonspecific protein therapy are obtained by those whose diagnosis is most accurate and whose therapeutic measures are individualized.

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ABSTRACT OF DISCUSSION

LUTHER C. PETER, M.D. (Philadelphia, Pa.): In my experience, milk injections have yielded very good results in many cases. We have been in the habit of sterilizing the milk for eight minutes. Whether this is sufficiently long to produce perfect sterility I am not sure. The milk is strained through gauze. A needle of large caliber is used, and the injection is made into the buttocks. As a rule we begin with 5 c.c. in the normal adult. The next day 6 c.c. is ordered, and 7 c.c. the third day. Subsequent doses are administered every other day—in all, six injections I believe, without being able to give absolutely scientific data, that we have obtained very satisfactory results in many of our infections.

We have not tried diphtheria antitoxin for the reason that it is a horse serum, and many patients are sensitive to horse serum. We see no reason for taking a chance when typhoid serum is less dangerous and has the added advantage of conferring immunity against typhoid fever for a considerable period. However, we prefer milk for general use, although various forms of milk protein seem to be of equal value.

JOHN C. MCALLISTER, M.D. (Ridgway, Pa.): It seems there is no uniform time of sterilization or dosage in milk injections. At the Meller clinic in Vienna, they continue boiling the milk four minutes after it starts to boil. They give a dosage of 10 c.c.

I have used milk in a few cases, and I believe with good results. In no instance has the temperature run to 103°. The effectiveness of the treatment depends upon the reaction as measured by the temperature afterwards. If it does not approach 102° or 103°, the dosage of milk has not been sufficient. Injections should be made at the beginning of infection, and in adequate doses.

DR. BERENS (in closing): We give milk injections, and with good results in some cases; but where it is possible, we prefer to give something else that we know more about. We obtain very little reaction from milk unless we use milk which is allowed to stand, or grade-B milk. Eight or ten minutes of boiling will probably kill all spore-forming organisms, although this is not certain.

The question of the temperature reaction is a very important subject, but I do not believe it has been definitely proved that increased temperature is absolutely necessary to produce beneficial results.

I understand that in Germany they use milk in perforating wounds. Tetanus antitoxin is easily obtained here, and we prefer this for such wounds for its specific and nonspecific effect, although the eye is seldom infected by the tetanus organism. It is well known that in the World War tetanus antitoxin was used immediately in all eye injuries, and some authors have attributed the low incidence of sympathetic ophthalmia to its use.

EXPERIENCE WITH THE MALARIAL TREATMENT OF SYPHILIS*†

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The malarial treatment of paresis was introduced by Wagner-Jauregg of Vienna in 1917, after many experimental trials with other fever-inducing inoculations. He has treated in his clinic over a thousand cases of paresis with malarial inoculation. Of the first nine patients treated in 1917, four developed remissions and three were back at their vocations for six and a half to seven and a half years, up to the time of the last publication.

In the group treated in 1919-20 (25 cases), 18 had complete remissions with ability to return to work. Five had remissions lasting for five years (the time of last publication) and two more were working. In 1920-21, there were 116 patients, of whom 78, or 67 per cent, had remissions. Thirty-eight of the patients, or 32.7 per cent, were well for a period of four to four and a half years, up to 1925.

In 1921-22 there were 250 cases of paresis treated, with 166, or 66 per cent, remissions. Eighty-three, or 33 per cent were complete remissions.

Nonne, of Hamburg, in the last edition of his well-known book, *Syphilis und Nerven-system*, gives a report of 96 clinically and serologically proven cases of paresis treated with malarial inoculation. Forty-eight per cent were enabled to return to work. Later this number was increased to 68 per cent.

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In England and the United States, the percentage of remissions has been quite comparable with the original results obtained in Vienna.

Personal Results

The results herein reported have been obtained on patients observed over a period of eighteen months. European observers of the effects of malarial therapy in neurosyphilis, and more particularly in dementia paralytica, stress the importance of the time factor subsequent to the treatment. Many of the treated cases fail to show either clinical or serologic improvement for many months. Those using this type of therapy should keep this important point in mind because of its bearing on the prognosis. However, a small proportion of the patients show definite improvement either during the last malarial paroxysms or shortly after their cessation.

Our studies were made upon patients with paresis, tabes dorsalis, cerebrospinal syphilis, both diffuse and localized, and congenital syphilis. The total number of patients in the study is 53. We have treated more than this number, but there have been excluded from this report patients who passed through abortive attacks of malaria or who have been so recently treated as not to warrant their inclusion.

1. Results in Paresis

All of these patients, as well as the others with various types of neurosyphilis, were examined and the diagnosis confirmed by competent neurologists (Drs. Potts, Patten, and Yaskin). In all of the paretics the serologic and neurologic changes were more or less uniform. The mental symptoms, however, varied from a simple euphoria to the severest maniacal and depressive manifestations. Estimation of the value of fever therapy in these paretics has been based not only upon the neurologic and laboratory findings subsequent to the treatment, but more particularly upon the mental results. For various reasons the term "cure" is best avoided; the preferable terms are "complete remission" (permanent), "partial remission" (temporary or followed by a very gradual but definite improvement, ending in either a complete remission or as an arrested case with definite mental changes still present), and lastly, patients in whom the treatment had no effects whatever. In this connection, it should be emphasized that this treatment, in not a single instance, had deleterious effects on the paretic himself.

In our group of fourteen paretics, representing all the types of the disease, there was a complete remission in four patients, and partial remission in six patients, one of which was temporary; two of the latter are still improving, and the other three are stationary. Three were uninfluenced by the treatment and one died. The death occurred very early in our series, and took place in an advanced paretic who developed trophic lesions on the pressure points of the shoulders, buttocks, and heels, and subsequently a bronchopneumonia.

Generally speaking, mental alterations in paretics are of several classifiable types. These are: the maniacal, the expansive, the depressed with progressive deterioration, and the paranoic. In our experience and in the experience of others, it is the first two types which are specially responsive to malarial therapy, despite the fact, as has been pointed out, that these types show very slight tendency to spontaneous remissions. Of the four patients with complete remissions, two were of the expansive and two were of the maniacal type.

The patients with complete remissions are, at the present time, to all intents and purposes, mentally normal and are all back at work. In one, return to mental normality occurred shortly after the cure of his malaria, and he has remained normal for over fifteen months. This patient was a man of thirty-five, with classic serologic and clinical evidences of paresis. He had delusions of grandeur, and was so violent during his hospital sojourn that he had to be restrained hand and foot. This patient returned to his home perfectly rational, and has resumed his work as a civil engineer, giving entire satisfaction for the past sixteen months. His blood Wassermann has become negative, and the colloidal gold test in the spinal fluid which was characteristically paretic has changed to a luetic type. The spinal Wassermann is still positive, but not so strong as it was originally.

The physical improvement in this group, and in more than half of those who showed partial remission, was commensurate with the psychic amelioration in the direction of speech defects, sphincter control, libido, and muscle tremors. Reflexes and pupillary changes remained uninfluenced or were but slightly altered. In one of those with complete remission, however, an Argyll Robertson pupil disappeared and a hyperreflexia became normal. One of the most striking improvements in many of the malaria-treated patients, in all forms of neurosyphilis, is the wonderful feeling of well-being and the progressive gain in weight subsequent to the treatment. Several of the paretics weigh from fifteen to twenty pounds more than their best previous weight. This gain in weight is not always associated with mental improvement. In one paretic, classed as partial remission, with very

marked somatic complaints, filthy habits, and memory disturbances, all is normal except for a single complaint regarding inability to digest his food (Charts 1 and 2).

Chart 1. Spontaneous Remissions in Paresis

(From Gerstmann)

		Per Cent
Acker (1888)		14.3
Behr (1900)		4.08
Jarhmarker (1901)	(women)	14.8
Mattey (1901)		7.1
Hoppe (1901)		15.0
Gaupp (1903)		10.0
Kraepelin		15.9
Joachim (1912)		4.0
Dubel (1916)	(men)	13.5
	(women)	6.5
Weichbrodt (1920)		10.0
Weggendorfer (1921)		13.0
Kirschbaum (1923)		11.7
Sophoff (1924)		4.8
Average		10.6

We were able to make subsequent serologic studies in from four to twelve months in all of those with complete remission and in some of those with partial remission. In agreement with other observers, the serologic alterations for the better bore no constant relation to mental changes. In one of those classed as a partial remission, both spinal fluid and blood became entirely normal within four months after the treatment, although the mental condition remained uninfluenced. Eight months later, the serologic conditions remain negative, while the mental status is stationary and does not as yet show any of the progressive deterioration his type usually undergoes.

In those in whom complete remissions occurred, favorable serologic changes were found, usually in the cell count, globulin content, and colloidal-gold reaction with the spinal fluid, the complement-fixation reaction being as a rule less influenced. The cell count was the first and most commonly observed change, dropping, as a rule, to very nearly normal in fluids originally showing from fifty to several hundred cells (Chart 3).

2. Results in Tabes Dorsalis

These patients were treated with two objects in view; namely, to control symptoms resistant to the usual antisyphilitic remedies and to arrest the progress of the disease.

Seven tabetics out of ten treated went through a course of malarial paroxysms considered therapeutically sufficient. Of these seven, four had active subjective symptoms consisting of gastric crises in three and shooting pains in the extremities in one. In all, the pains became decidedly worse and almost unbearable during each malarial paroxysm. When discharged, however, all felt better, and stated that the result justified the suffering through which they had gone. They were practically free from pain. One with gastric crises could not be traced subsequently, but the remaining two with gastric crises have been symptom-free for six months and two months respectively. The one who had been symptom-free for six months had had two minor attacks during this time, but they disappeared spontaneously in several days. Neither of these patients had ever had more than three or four weeks of freedom from pain since the onset of their condition. The ataxia in this last patient, and in another with severe pains in the extremities, has shown definite improvement. The latter patient has been pain-free for two months, and according to his own statement, feels well repaid for going through the "cure."

In two tabetic patients, there had already developed a partial optic atrophy. In neither instance was this influenced except temporarily and subjectively. This has progressed, as it so commonly does, to complete blindness.

Serologic studies were made from three to six months after the malarial course. In those in whom such studies were possible, improvement in the pleocytosis and globulin content was noted, and in one instance, a spinal fluid, which had been strongly positive before treatment and had shown a definite increase in globulin, was found to be completely negative three months later (Chart 1).

3. Results in Congenital Syphilis

It is generally recognized that congenital syphilitics often fail to respond to the usual antisyphilitic remedies in the sense that seropositive patients often remain so despite the most efficient and prolonged treatment. This is particularly true in those who have never had antisyphilitic treatment before, and in whom the disease is old. In general, it may be said that the older the syphilis, as in the acquired form, the more difficult it is to obtain negative Wassermanns.

We selected for this study cases such as the above, that is, untreated old congenital syphilitics, as well as those deemed "Wassermann-fast" after prolonged treatment with the usual drugs.

Only seven of those treated developed a sufficient number of malarial paroxysms to warrant inclusion in this study. Five of these were chronic congenital syphilitics who had had little or no treatment, and two were considered "Wassermann-fast." The longest period of observation since malarial inoculation has been one year. In neither the "Wassermann-fast" nor the

Chart 2. Clinical Results of Malarial Therapy in Paresis

Wagner-Jauregg

Treated nine cases of paresis in 1917.

There resulted: 4 complete remissions, 2 incomplete remissions, 2 uninfluenced, 1 died during febrile period.

Three of these patients at work at present time 6½ to 7 years later (33 per cent).

Wagner-Jauregg

Treated 25 cases of paresis 1919-1920.

There resulted 18 remissions: 7 were complete, 6 were incomplete, 5 were incomplete of mild grade.

Of these, 8 are at work 5 years later (32 per cent).

Wagner-Jauregg

Treated 116 cases of paresis in 1920-21.

There resulted 78 remissions, of which 42 were complete.

33 per cent at work and in complete remission 4 to 4½ years later.

Nonne

48 per cent incomplete remissions and at work.

Personal Results

28 per cent complete remissions.

chronic untreated syphilitic were the complement-fixation or the precipitation reactions influenced.

In two, diagnosed juvenile tabes, definite spinal-fluid changes were present before the treatment. One of these patients had so marked an ataxia before treatment that he was practically bedridden. When seen six months later, his ataxia was barely noticeable. The serologic results will be found in Chart 1.

Tertiary ulcerations of the leg of more than a year's duration in one of these patients healed completely by the tenth malarial paroxysm.

4. Results in Cerebrospinal Syphilis

This group consisted of twenty-five patients. The objects sought were the determination of the effects upon acute lesions or the palsies, the arrest of progressive second- and eighth-nerve atrophy, the effect upon the serologic abnormalities in the spinal fluid, and lastly the prevention of paresis. The number of syphilitics who will develop paresis is, according to most authors, less than five per cent. No one, of course, can foretell which neurosyphilitic will become a paretic. However, it would appear to be safe to assume that neurosyphilitics whose spinal fluids are uninfluenced by intensive and prolonged treatment by approved methods are potential candidates for paresis. We feel that such types should be given the possible benefit of this method of treatment.

Of the seven patients who had optic atrophy in various stages, all showed a temporary improvement which was followed by progressive blindness. Those with acute palsies presented

Chart 3. Spinal Fluid Changes Subsequent to Malaria Inoculata

No.	Disease	Before				Time	After				Mental Results
		Cells	Globulin	Gold Sol.	Wassermann	Interval	Cells	Globulin	Gold Sol.	Wassermann	
1	Paresis	—	—	5555555421	4+	14 mos.	—	—	0112312100	3+	Complete Remission
2	Paresis	33	—	4411000000	4+	5 "	4	—	1111000000	4+	Complete Remission
3	Paresis	42	—	5554424200	4+	4 "	22	—	5555432200	4+	Temporary Remission
4	Paresis	30	+	0	4+	8 "	14	—	00----	neg.	Partial Remission
5	Paresis	81	++	1111221000	4+	6 "	13	—	1112000000	4+	Complete Remission
6	Paresis	184	+	5544322221	2+	5 "	14	+	3322110000	4+	Marked Partial Remission
7	Paresis	2	—	5554422111	3+	8 "	6	—	2211000000	2+	Complete Remission
8	Paresis	24	+	3322211000	4+	4 "	5	—	4555543210	neg.	Temporary Remission
9	Paresis	—	—	5543455553	4+	10 "	—	—	5555554210	4+	Uninfluenced Remission
10	Tabes Dorsalis	21	+	—	4+	6 "	3	—	.....	3+	.....
11	Tabes Dorsalis	47	—	—	3+	5 "	6	—	.....	2+	.....
12	Tabes Dorsalis	0	+	—	4+	3 "	3	—	.....	neg.	.....
13	Tabes Dorsalis	0	+	—	3+	8 "	7	—	.....	neg.	.....
14	Congenital Syphilis	—	—	3443322111	4+	6 "	...	...	2111100000	neg.	.....
15	Cerebro-Spinal Syphilis	21	+	333330000	4+	6 "	10	—	11221100	3+	.....
16	Cerebro-Spinal Syphilis	23	+	2554331100	4+	5 "	11	—	211110000	4+	.....
17	Cerebro-Spinal Syphilis	88	—	—	4+	6 "	5	—	—	2+	.....
18	Cerebro-Spinal Syphilis	47	—	—	3+	5 "	6	—	—	2+	.....
19	Cerebro-Spinal Syphilis	—	+	—	2+	7 "	—	—	—	neg.	.....
20	Cerebro-Spinal Syphilis	147	+	—	4+	5 "	...	—	—	wk.+	.....
21	Cerebro-Spinal Syphilis	158	+	1123211000	4+	4 "	6	—	0	wk.+	.....
22	Cerebro-Spinal Syphilis	117	++	1111122100	3+	5 "	41	+	5554321000	2+	.....
23	Cerebro-Spinal Syphilis	21	+	—	4+	9 "	11	—	—	neg.	.....
24	Cerebro-Spinal Syphilis	65	—	10000000011	4+	6 "	7	—	3332100000	4+	.....



Fig. 1. Tertiary ulceration before malaria inoculata in a cerebrospinal syphilitic.

rather variant results. Two patients with third-nerve palsies and one with bilateral seventh-nerve palsy were not influenced, whereas a fourth patient with paralysis of the left leg regained almost complete control of it by the ninth malarial paroxysm. A severe tertiary ulceration on the leg of one of them healed completely by the end of the malarial course (Figs. 1 and 2). In two patients, one with a localized form of cerebrospinal syphilis causing constant nodding of the head, and the other with epileptic attacks, complete relief took place shortly after the cure of the malaria. Both of these patients have been symptom-free for eight and ten months respectively. The patient with syphilitic epilepsy had been resistant to the usual antisyphilitic remedies for many months. The epilepsy has recently relapsed.

The serologic studies in these cases showed changes similar to those occurring in other forms of neurosyphilis after malarial therapy. (Chart 1.) Several patients showed no spinal-fluid changes primarily, a few were subsequently lost track of, and a number refused lumbar puncture a second time.

CLINICAL COURSE AND TREATMENT OF MALARIA INOCULATA

Tertian malaria, the type used in this therapy, does not run a uniform course in each inoculated individual. Patients react differently to the infection irrespective of the clinical course in the donor. The fever may be a single tertian in the one and a double tertian in the next; in some instances, two complete cycles may occur within thirty-six hours. Although the single tertian fever is more desirable than the quotidian type, in that it enables the patient to recuperate both physically and mentally before the next paroxysm, there is no method of constantly inducing this. In fact, the variability of the strain or of the immunologic reactions of the patient, or both, sometimes leads to abortion of the disease after two or three paroxysms. In some instances there is no "take" at all. The negro is particularly resistant to malaria inoculata, but this resistance becomes less marked the lighter or closer to the Caucasian the particular negro is. The height of the temperature is likewise variable. In some it may not reach 102°, and in others it may reach 106° or more. The temperatures vary with each paroxysm, both in height and duration. The subjective symptoms are chiefly headache, vomiting, and muscular pains. These symptoms vary in degree and the time of their onset in each patient. Headache is usual, but vomiting is less common. Chills may be entirely absent, thus differing from natural malaria. In such cases, the first sign of a malarial paroxysm is simply a febrile rise to 103° or more. As a rule, when chills are absent, it is only during the first few paroxysms. The highly neurotic patient suffers severely, and it may, at such times, be necessary to terminate the malaria abruptly or to ameliorate it with small doses of quinin. Paretics, in our experience, do not react this way. In fact, when rational, they usually express delight with the treatment. The loss of weight is variable, and is naturally greater in those with severe vomiting and inability to eat as a result of the associated nausea. A successful malarial treatment should produce temperatures of 103° to 106°, persisting at such points for from six to twelve hours.



Fig. 2. Tertiary ulceration after the ninth malarial paroxysm. The lesion is entirely well so far as ulceration is concerned. One month after the completion of the malaria cure, ulceration began to redevelop.

As will be pointed out later, malaria inoculata is extremely susceptible to drugs. It is far easier to cure than is natural malaria. Thirty grains of quinin administered the first day, followed by fifteen grains a day for six succeeding days is usually sufficient. Neoarsphenamin may bring about the same result in doses of 0.9 grams, but reliance is preferably placed on quinin. The cure of the malaria is judged by the absence of the plasmodium from a blood smear prepared from blood concentrated in the centrifuge.

Inoculation, Incubation, and Number of Paroxysms

The infected blood is obtained from a patient suffering with natural or artificially induced malaria of the tertian type. Two or three cubic centimeters of blood, at any stage during the course of the malarial infection, is injected into the recipient either intravenously or subcutaneously. The intravenous route gives a much shorter incubation period. We have injected quite a number of patients, but have had a larger percentage of "nontakes" by this method. We have studied the corpuscle agglutinations in the donors and the recipients, and we are inclined to believe that some of the failures are due to cross agglutination. The subcutaneous method of inoculation is, therefore, preferable. The blood is injected in the back over the scapulæ or any other suitable place. This method will almost invariably give a "take," particularly if the strain of infecting plasmodium is at all active, and it is the method of choice.

The incubation period varies from four to twenty-one days, and averages about twelve days. At the end of this period there is, as a rule, a chill followed by a rise in temperature. This will occur daily or every other day. The number of paroxysms a patient is permitted to have varies from eight to sixteen, depending largely upon the physical stamina, age, and complications.

Under certain conditions, reinoculation is necessary. This may be attempted in those whose paroxysms were insufficient, or in those in whom some improvement has occurred from the previous course and an effort is made to make still further gains. Reinoculation after a short period is not always possible. We have been successful in but a single instance out of five attempts.

Caution Against Use of Drugs During Malaria Inoculation

Natural tertian malaria is, as a rule, a benign disease and easily influenced by quinin. Artificial tertian malaria is even more easily influenced by this drug. A single grain of quinin hydrochlorid will often inhibit or interrupt artificial malarial paroxysms for from twenty-four to forty-eight hours. Not only is malaria inoculata susceptible to small doses of quinin, but it is likewise susceptible to a number of other drugs, notably the coal-tar products. Acetanilid, antipyrin, phenacetin, amidopyrin, acetylsalicylic acid or aspirin, allonal, etc., if given during the incubation period or during the paroxysms, are apt to abort the disease. Once inoculated, a patient should not be given any of these drugs. It is possible that other drugs will do the same thing. It is, therefore, advisable to give a patient as few drugs as possible and, if narcotics or analgesics are necessary, to use chloral or opium.

Chart No. 4. Effect of Quinin (1 Grain) in a Case of Advanced Paresis With Hyperpyrexia

Date 1926	Medication	Temperature
Dec. 11	none	106°
Dec. 13	none	105⅗°
Dec. 15	none	107°
Dec. 16	quinin (1 grain)	....
Dec. 17	none	102°
Dec. 19	none	normal
Dec. 21	none	normal

Complications and Contraindications

The use of malarial inoculation for therapeutic purposes is not entirely free of danger. It is not advisable to carry out this treatment unless the patient is hospitalized and under constant supervision. This is especially true for advanced paretics, in whom complications are particularly prone to occur. The following may be considered the most frequent of the complications: progressive weakness; herpes labialis; edema of the feet, ankles, face, and hands; anemia, which is also the basic factor in the edemas; jaundice; delirium; hyperpyrexia; and myocardial weakness. Many of our patients gradually developed, noticeable about the seventh or eighth paroxysm, a yellowish cutaneous tint common to malaria patients and not due to icterus. With the exception of hyperpyrexia and myocardial weakness, none of these disturbances, as a rule, call for termination of the malaria. The hyperpyrexia can be easily controlled, as has already been noted, and must be in advanced paretics in particular.

In advanced paretics, trophic lesions may develop with extreme rapidity. Large bullæ at pressure points may be noted.

Tabetics with subjective or sensory disturbances should be warned that their pains are apt to be intensified during the malarial paroxysms.

The postmalarial anemia and anemic edemas may persist for several months before the iron preparations used will control them.

Deaths as a result of this form of therapy have been reported as reaching from six to eight per cent. Our single death gives us a mortality rate far below this figure. It is our belief that the published percentages can be greatly reduced by careful selection of cases and close surveillance of the malaria-infected patients.

Persons with moderate or severe visceral disease, such as myocarditis or renal disease, as well as elderly persons and very advanced emaciated paretics, are not suitable candidates for this type of therapy. In these latter, marked weakness may develop so rapidly as to necessitate termination of the malaria.

Treatment of Syphilis After Malarial Therapy

There is a diversity of opinion concerning the use of active antisyphilitic treatment subsequent to malaria inoculata. We have observed two paretics made decidedly worse, despite definite signs of previous improvement, when given an injection of iron cacodylate and neoarsphenamin shortly after the cure of their malaria. On the other hand, we have observed a tertiary ulceration, which had healed completely during the fever, spring into activity within one month of the malaria cure.

In Vienna most of the malaria cases are not given subsequent antisyphilitic medication, as, in their experience, it did not prove of value. There are others who feel that postmalarial antisyphilitic medication is definitely indicated, but ought not to be given for some months after the malaria cure. In the case of the paretic, if treatment is to be given, it should not be given before three months.

Summary and Conclusions

Twenty-eight per cent of the paretics treated have become clinically normal. Tabetics with various sensory disturbances have been definitely benefited. Optic neuritis in both tabetics and cerebrospinal syphilitics was not influenced. The Wassermann reaction in congenital syphilitics was not altered. Definite beneficial results are shown on certain cutaneous and cerebrospinal syphilitic lesions, as well as on the spinal fluid.

Nonspecific therapy in syphilis has been widely advocated in recent years.* Such agents have been shown to be of value in aiding the present-day treatment of chronic syphilis. Malaria inoculation possibly represents one type of this form of antisyphilitic therapy. Our results, as well as those of other observers, are such that there can be no doubt of its value in certain forms of neurosyphilis and particularly in paresis. It would appear, both from a clinical and anatomico-pathologic point of view, that the best results should be obtained in early cases. The recognition of the fact that clinically early cases usually mean fairly well-marked pathologic changes, is so important that we believe those chronic neurosyphilitics in whom prolonged intensive antisyphilitic therapy has failed to bring about a return of the spinal fluid to normal should be given the benefit of malaria inoculation if only with prophylaxis against paresis in view. It is certain, moreover, that this type of therapy offers more hope of results than the usual drugs, irrespective of the stage of the paresis. Although sufficient time has not elapsed to enable us to determine the permanent effects in these latter cases, the immediate effects warrant its use in a condition hitherto admitted by all to be incurable.

*Greenbaum, S. S., and Wright, C. S.: "Effects and Value of Nonspecific Therapy in Syphilis," *Arch. Dermat. & Syph.* 10: 551, Nov., 1924, and 12: 858, Dec., 1925.

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DISCUSSION

J. Frank Schamberg, M.D. (Philadelphia, Pa.): The work of Professor Wagner-Jauregg of Vienna, to which Dr. Greenbaum has referred, was not haphazard, but was a careful scientific procedure based upon much preliminary study. From the time of Hippocrates and Galen down to Sydenham and on to the present, physicians have noted that patients suffering from various psychoses were at times, through the influence of an intercurrent febrile disease, remarkably improved or indeed cured. Wagner-Jauregg, impressed by this observation of many physicians, proceeded to develop in his paretics various forms of febrile disturbance. He first employed injections of tuberculin, which produced a rise of temperature. This was later associated with mercurial treatment: these patients were shown to live longer than paretics who were not thus treated. Then he proceeded to use typhoid vaccines, erysipelas, and finally malarial inoculations.

His work began in 1887, and in 1917 he gave his first inoculation with malaria. He inoculated nine paretics in that year, and those who survived have been under careful observation ever since. Up to last year, three of these paretics were in good condition and back at work. Since that time he and his associates have treated many hundreds of patients with paresis by this means, and the percentage of results has been approximately the same. Nonne, of Hamburg, has treated a large series of cases with results even a little better than those obtained in Vienna. Throughout Germany, England, and the United States, hundreds upon hundreds of paretics have been treated by artificial malaria with much the same results.

It is true that paretics from time to time undergo remissions, but Kirschbaum, of Hamburg, has shown that these remissions, both quantitatively and qualitatively, differ from those following malaria, first in the percentage of remissions, and second in the extent and duration of the remissions. In the premalaria era,

paretic patients would have remissions from time to time for a year or longer, but that occurred in a small minority of the patients. The results now show that in some 1,100 cases of paresis treated up to April, 1925, with malarial inoculation, approximately one third of the patients are remarkably improved, one third moderately improved, and one third are uninfluenced. These figures are astonishing in a disease like paresis which formerly had an absolutely bad prognosis.

What the ultimate fate of these paretics will be, no one is in a position to state. We know that at the present time three out of nine of the first patients treated by Wagner-Jauregg over a period of seven and a half years are in excellent condition. The treatment has likewise been used in locomotor ataxia, and Behring of Germany has published some rather marvelous results. As a rather exceptional effect, a marked ataxic was able to resume dancing; in one of our series of cases mentioned by Dr. Greenbaum, a juvenile tabetic was almost entirely relieved of his ataxia. Every now and then an Argyll Robertson pupil may disappear, as well as certain other of the somatic evidences of tabes.

Last September, I visited Vienna and spent some hours with the late Professor Kyrle, who had been treating syphilis in all stages by malaria inoculation. He told me the treatment had obtained such a reputation among the populace generally that many of the patients who came to the hospital wanted the new malaria treatment. His treatment consisted, no matter what the stage of syphilis, of six injections of 6/10 grams of neosalvarsan once a week for six weeks, then an attack of malaria, and then six more injections of neosalvarsan. After that, observation and serologic tests. He had watched some cases over several years, and he was particularly impressed with the results in latent neurosyphilis, in which all previous measures had been tried without any influence on the spinal fluid. In the course of six months, as a rule, there was marked improvement, and in a year or so, in a large proportion of cases, the serologic findings were negative.

In the first case treated by us in June, 1925, we were dealing with a young paretic from the South, with marked serologic findings in blood and spinal fluid, and with a violent mania that necessitated his being restrained in bed. He was inoculated with malaria and passed through 15 paroxysms, at the conclusion of which he was mentally normal. He went home and resumed his work as a civil engineer, and has been giving satisfaction to his employers since that time. Spinal-fluid examination a month or so ago showed a moderately positive spinal Wassermann, but with a complete change in his paretic gold curve. This had changed to a luetic curve. His blood Wassermann became negative. It will be interesting to follow the subsequent course of this case.

It is very interesting to contrast the clinical results with the serologic. They do not always present a parallelism. One may have marked clinical improvement with no change in the serologic findings, and vice versa. Furthermore, in the cases of paresis treated by malaria that have come to autopsy, there has been noted a marked regression in the pathologic conditions in the cerebrum. Indeed, many cases have changed so that no diagnosis of paresis could be made. Furthermore, the finding of spirochetes in the brains of paretics after malaria presents an interesting study. Bratz had seven brains examined, and in not one could spirochetes be determined after an attack of malaria. Kirschbaum examined the brains of fourteen paretics who died subsequent to malaria, and spirochetes could not be found. Of course it must be remembered that in one third of all paretics it is difficult or impossible to find spirochetes, but in the hands of experienced investigators none could be found in the twenty-one cases mentioned. However, Foster examined three brains, and in one case he did find spirochetes.

A most interesting observation was made by Jahnel, who made a cerebral puncture of a paretic and found spirochetes. Shortly thereafter the patient developed a purulent pleuritis from which he died. Then, upon the most searching examination, no spirochetes could be found.

There are various theories as to what malaria does to paresis. There is no concurrence of opinion on this subject. The general feeling abroad is that the fever is not responsible for the improvement. Plaut and Steiner thought that antibodies were developed which inhibited the spirochetes. One observer believes the malarial plasmodia undergo destruction and constitute a foreign protein which raises the defensive mechanism of the body.

We have had opportunity, during the past few months, of making some experimental studies with the idea of shedding some light on the action of malaria. We injected malarial blood into the testicle of a rabbit, and gave a coincident inoculation of the other testicle with spirochetes. The malaria did not prevent syphilis from developing. We obtain 100 per cent of takes of syphilis in rabbits with intratesticular inoculation of spirochetes.

We then inoculated a series of rabbits with syphilis and four days later gave them hot baths (temperature 113° F.) with the idea of raising the body temperature. In eleven consecutive daily baths an average rise of four degrees Fahrenheit was induced. Not one of these rabbits developed syphilis. The result was so astonishing that we inoculated another series, with the same result. We then produced scrotal chancres in rabbits and subjected them to a series of hot baths, with the result that in 18 days the chancres had disappeared. In fact, they healed as quickly as if they had been given arsphenamin. Later their glands were excised and other rabbits inoculated, but syphilis failed to develop. We felt that we had therefore determined that the rise of body temperature in the rabbit was responsible for its immunity. The point remained to be determined whether it was a direct effect of the fever, or an indirect one.

We therefore heated spirochetes on a water bath to various degrees of temperature, and then inoculated rabbits with the emulsion. Heated to 104° F. for one hour, we still observed numerous motile spirochetes under the dark-field microscope, but inoculation failed to develop syphilis. We carried out quite a series of experiments along this line, and determined that the thermal death point for the spirochetes is 106° F. for six hours. Malaria frequently produces a rise of temperature to 106 degrees for six hours or longer.

Of course, whether the results in rabbit syphilis can be applied to human syphilis cannot be stated. Also whether raising the temperature of the body of human beings by hot baths will protect against syphilis is a matter determinable only by future observation. At the present time we are carrying out such experiments, but it is too early to report results.

In connection with the subject of malaria in the treatment of syphilis I am reminded of Shakespeare's couplet in Romeo and Juliet: "Take thou some new infection to the eye, and the rank poison of the old will die."

WALTER J. FREEMAN, M.D. (Washington, D. C.): The malaria treatment of paresis was inaugurated about four years ago at St. Elizabeth's Hospital, some 250 patients having been inoculated since then. We have obtained about the same results as Dr. Schamberg and Dr. Greenbaum. Some 25 to 30 per cent have good remissions; another 15 to 20 per cent have partial remissions; and there are a few failures. The serology improves more slowly than the clinical picture. The results after two years are better than those found after one year. The three-year results are still better, as Ferraro has pointed out. Of the 23 patients who have lived three years or more, we found 20 with a negative blood Wassermann. The spinal-fluid Wassermann was negative in 12 cases, and in some 85 per cent the colloidal gold curve was quite low.

We have studied at autopsy 15 patients who died of malaria or of intercurrent disease afterwards. The inflammatory manifestations of paresis were no longer recognizable in the brains of patients who lasted for any number of months, and the perivascular infiltrations and spirochetes had disappeared.

RICHARD F. L. RIDGWAY, M.D. (Harrisburg, Pa.): In the May, 1926, number of the ATLANTIC MEDICAL JOURNAL we reported 34 cases treated by malaria inoculations at the Harrisburg State Hospital. We have now inoculated 75 patients, and I am able to give a tentative report on 64. Of these 64 patients, we have 27 on parole for varying periods of time, running back to November, 1924. These people are at home, comfortable, and most of them are at work.

At the beginning of our treatment we had several deaths. Most of these were due to the fact that in a hospital the size of ours we do not have enough paretics to keep us going. Now we are having less trouble, because people are coming in for the purpose of taking the malaria treatment. Some people have been treated at home first, and valuable time has been lost. If results are to be obtained, the treatment must be started before serious damage has been done to the brain. During the last year and five months we have had no mortality at all.

The question has been asked, "What next?" It seems to me that if one inoculation of malaria can do good, why not give a second inoculation later on? We feel that the paresis patient who is doing well should be urged to take a second inoculation unless the blood and spinal fluid have improved remarkably. We feel that this is a simple treatment, more effective than anything else ever used for paresis, and, in experienced hands in a hospital, fairly safe.

HENRY W. CATTELL, M.D. (Philadelphia, Pa.): Attention may properly be called to the spirillum of relapsing fever *(Spirochæta obermeieri)* which I understand Plaut, of Munich, is largely using in place of the tertian malaria plasmodium employed by Dr. Greenbaum and his coworkers. The protozoan organism causing rat-bite fever has also been injected as a form of treatment for brain and cord syphilis with asserted good results.

DR. SCHAMBERG: In reply to the query as to whether a second malarial inoculation is ever carried out, I would say that in Vienna it has been quite frequently done. If a patient improves under malarial treatment, and later on, at the end of six months or a year, tends to show symptoms of relapse, the practice is to repeat the malaria inoculation. In some cases three inoculations have even been given. It is not always possible to accomplish this successfully because under certain circumstances patients seem to acquire more or less immunity.

Summer Diarrhea in Infants*

THE ETIOLOGY, SYMPTOMATOLOGY, AND DIAGNOSIS OF SUMMER DIARRHEA

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The purpose of this paper is to review the fundamentals of etiology from a practical bedside standpoint, symptomatology, and diagnosis of summer diarrhea merely as an introduction to the more important paper to follow on modern treatment.

Summer diarrhea, of course, could be interpreted to include any type of diarrhea occurring during the summer months, and in reality all types of this symptom complex can occur then. There are, however, two kinds of diarrhea more apt to appear during warm weather, and only these will be considered in this paper. The milder of the two is fermentative diarrhea, and the more severe and epidemic type is acute infectious diarrhea, dysentery, or ileocolitis. It is the latter condition which is generally referred to as "summer diarrhea."

Nothing new can be presented on symptomatology and diagnosis of this condition, since symptoms have probably always been the same, and diagnostic ability, as a rule, rarely need be acute to distinguish this complaint. Laboratory aids in diagnosis are of questionable value, since the bacteriologic etiology remains much in doubt at the present time. Happily, treatment has in many ways been improved during recent years, and the death rate has fallen materially therefrom. Proper diagnosis is absolutely essential for correct treatment, and time is a big factor, for a proper régime must be instituted early in severe cases if even life itself is to be saved, and often improper procedures mean not only delay in recovery but may further the pathologic processes present.

FERMENTATIVE DIARRHEA

Although great advances have been made during recent years concerning the bacteriology of the intestinal tract, many questions still remain unsettled. It is known, however, that the intestines *normally* contain both putrefactive and fermentative bacteria, as well as many other varieties. The former organisms thrive on protein, and the latter, or fermentative group, thrive on starch and carbohydrate. Under the proper conditions it is possible for the fermentative bacteria

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to be in the ascendency over the putrefactive bacteria, and when this occurs there results what is termed a fermentative diarrhea, with symptoms characteristic of the condition. The Finklestein school attributes this form of diarrhea to carbohydrate indigestion. Kendall has shown a bacteriologic cause. Undoubtedly, many of these cases are due to sugar indigestion and many others to the growth in the intestinal canal of bacteria which live on carbohydrate. This is an academic question, however, and is of little practical importance, in that its answer would in no way influence the treatment.

Fermentative diarrhea usually occurs in infants under eight months of age who have previously been fed a high sugar or starch diet. The onset, as a rule, is not sudden. The stools number from 5 to 10, or more, per day. Their odor is sour and the reaction acid, giving rise to inflamed buttocks and chafing. A great deal of mucus and many soft curds of undigested milk are present, giving the movements a bubbly or frothy appearance. There is *no blood* or pus present. The temperature may be only 101° or a great deal higher, depending upon the severity of the infection present. The fontanel, abdomen, and eyes may be sunken, and the deep, sighing breathing of hyperpnea present. The urine may show sugar and casts. This is the picture of "alimentary intoxication."

Acute Infectious Diarrhea

(Ileocolitis, dysentery, summer diarrhea)

The etiology of summer diarrhea is a subject that has evidently interested many investigators. Much work has been done, both bacteriologically and in investigating external conditions during many different epidemics, but very little of practical importance has been learned. It has been demonstrated that far less summer diarrrhea is seen in breast-fed infants than in those artificially fed. Most summer diarrhea is seen during infancy, that is, in the first two years of life. The cases are prone to appear in groups, and do not follow any particular geographic distribution. They are more prevalent in the cities, however, than in the outlying districts. The temperature of the external world is a factor, as most cases develop during the warmest days, and its onset is less likely on cool days. Bleyer, of St. Louis, found 13 per cent of his cases to be previously breast-fed. I can think of nothing more discouraging than to have one of your robust breast-fed infants succumb to this terrible malady—nor anything more difficult to explain to a bereaved parent. Nabarro, of London, in 150 cases of summer diarrhea, found 45 to have been previously without feeding difficulties.

Bacteriologically, many different organisms have been isolated from the stools of infants having dysentery, among which are the Flexner dysentery bacillus, the Shiga dysentery bacillus, the colon bacillus, and the streptococcus. Very few bacteria have escaped suspicion. In various outbreaks, many different organisms have been isolated by the same observer or group of observers. It would seem fair to conclude that this condition is not always caused by the same organisms, that different organisms can predominate at different times, and that the bacteria and their toxins are introduced from without, maybe most often in unclean or contaminated milk.

Rarely is water the carrier, but frequently other foods than milk may be the medium. Unclean utensils, the house fly, and many factors will have to be considered as possible sources of infection. In other words, the better the milk supply, the better the care in the handling of it and all other foods, and the better the general hygiene and cleanliness, the less likely is a case of dysentery to develop. The routine use of boiled milk in infant feeding is, to my mind, our greatest weapon of defense against this disease. Apparently, much less trouble is seen from the use of boiled certified milk than from the use of the commercially pasteurized product, even though boiled. Dysentery is no doubt an intoxication caused by an infection of bacteria or their toxins, or both, occurring in an infant whose resistance to infection has temporarily been lowered by hot weather.

The symptoms of summer diarrhea are all too familiar to physicians treating infants. There is a history of sudden onset, high temperature, prostration, vomiting, and extremely loose stools containing *mucus and blood*. The stools are numerous—ten, twenty, or more in 24 hours—and after all the fecal matter has been evacuated, are composed of mucus, blood, and pus, each evacuation being accompanied by tenesmus. Membrane is present in the severest cases. The odor of the stools is slight, and has been described as resembling that of new-mown hay. When ulceration of the intestine has gone as far as gangrene, the odor is putrefactive. Prolapse of the rectum is not uncommon. The temperature ranges from 104° to 106°, with uncontrollable vomiting at the onset and a rapid loss of weight. Thirst is extreme. This soon produces that awful picture, so familiar to all of us, of dehydration—the sunken eyes, the hollow cheeks, the pinched expression, the scaphoid abdomen with its loose, inelastic dry skin, and the rapid breathing of hyperpnea of acidosis. There may be tenderness over the course of the colon, but there is no muscle rigidity. The spleen and liver

may enlarge, and the relative loss of body weight, due to dehydration, is extreme. The blood shows a leukocytosis, polynuclear in type, usually about 20,000. *Toxemia, and not the number or character of the stools, is the criterion of the severity of the case.* Nervous symptoms, such as twitching, convulsions, delirium, retraction of the neck, or coma, are not uncommon in severe cases, and are of bad prognostic import. The urine is apt to show albumin and casts.

It is impossible to determine from the symptoms what form of organism is the cause of the disease in the individual case. Microscopic examination of the stools is of little assistance in differentiating the various types, unless the streptococcus is the cause, in which case they are usually present in large numbers and easily recognized. Blood cultures are of little use, and a well-equipped laboratory is required for an exact determination of the causative organism. The dysentery bacillus can be found by proper cultural methods in a large number of cases in which it is the cause, two to three days being required for the work. There is an intracutaneous test developed by Baker which is said to give positive results in 6 to 18 hours.

True cholera infantum need be mentioned only to remind us that fortunately it has become extremely rare. So rare, in fact, that many pediatricians working in the East Side of New York have never seen it. This condition is characterized by sudden onset, with many rice-water stools, collapse, and generally death in 24 to 48 hours. *There is no blood in the stools.*

Differential Diagnosis

It is rare to see a case of infectious diarrhea without blood and pus in the stools, and for practical purposes this is the best way of distinguishing it from fermentative diarrhea. In the latter condition blood in the stools may be seen, but there is never very much of it and it never lasts long. Large amounts of macroscopic pus are usually seen in infectious diarrhea, while in fermentative diarrhea such an occurrence is not common. The temperature curve is also of considerable assistance in diagnosis. It may be high or low in either condition, but in fermentative diarrhea it rapidly drops as soon as the intestine is emptied and proper feeding instituted. In infectious diarrhea, on the other hand, the temperature is likely to continue for a week or more, in spite of purgation and proper feeding.

On account of the bloody stools in both conditions, intussusception is not infrequently confused with infectious diarrhea, the usual mistake being to overlook the intussusception and to call it infectious diarrhea. The onset in intussusception is sudden, without fever or diarrhea at first. Blood appears in the stools soon, and abdominal pain with tenesmus is marked. Vomiting is extreme and may be fecal. The abdomen is not scaphoid but distended, and a sausage-shaped tumor can be felt in many of the cases.

Acute appendicitis is sometimes accompanied by a diarrhea which makes the diagnosis difficult or less likely to be considered, particularly when this occurs in the midst of a summer-diarrhea epidemic.

One should always remember, when called to see a supposed case of summer diarrhea in an infant, that the symptoms of diarrhea are not necessarily the all-important thing. Some other condition may be the primary cause, and the diarrhea may be caused by a secondary parenteral infection. It should not be forgotten that a common cold, pneumonia, bronchitis, otitis media, mastoiditis, sinusitis, tonsillitis, and other throat infections, the acute exanthemata, pyelitis, and in fact any of the infectious diseases, such as typhoid fever, may be the primary cause of the diarrhea.

In all cases of diarrhea—be it summer or not, in the midst of an epidemic or not, regardless of how simple the diagnosis seems, or the first impression of the case—a complete physical examination, including a careful palpation of the abdomen, an inspection of the ear drums with an otoscope, a microscopic urinalysis, with probably a rectal examination, is an absolute necessity for a proper diagnosis, and is the very least that should be done for the little patient. Let us not rest content with the present-day decline in the infant death rate from summer diarrhea, but rather, let the progress so far be a spur to better and more careful work in the future.

TREATMENT OF SUMMER DIARRHEA IN INFANTS

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This paper deals with the treatment that the author has found useful over a period of some years. It would be impractical, if not impossible, to present the views of others on summer diarrhea because of the wide divergence of opinions.

Many years ago Moro stated that summer diarrhea meant three conditions—toxicosis, dehydration, and acidosis. The overcoming of these three usually urgent conditions means successful treatment. The essential principles of treatment are: (1) To eliminate the poison (bacterial or food toxin); (2) to counteract the acidosis by medication and food; (3) to overcome the loss of fluid from diarrhea and vomiting

by supplying fluid in various ways; (4) to treat symptomatically hyperpyrexia, collapse, tenesmus, convulsions, or other symptoms as they arise.

Although the teaching of some years ago still lingers in the minds of most grandmothers and not a few doctors, I am absolutely against purgation in these cases unless seen at the very onset; i.e., within twelve hours. A great deal of harm and no good has been done by the use of castor oil, salts, and other purgatives after a baby has been sick one or two days. Nature has started her own elimination, and the use of purgatives makes a bad condition worse. At the present time we have no rapid method of elimination through the alimentary tract, and must, therefore, treat the toxicosis in other ways. The skin may help to eliminate, and should not be neglected. Mustard baths and cool sponges will be of benefit, not only in elimination but also in helping to control convulsions and hyperpyrexia. Care should be taken not to exhaust the patient by these measures.

The complete withdrawal of food may be necessary, depending upon the severity of the symptoms, but should never be longer than twelve to twenty-four hours, unless there is persistent vomiting. If there is vomiting, everything by mouth should be withheld until it is controlled. Fluids may be introduced intraperitoneally or subcutaneously. It is most important that the infant secure fluid by some route. If there is no vomiting, water should be given during the starvation period as often as the baby will take it. In two cases where water was refused, very weak tea sweetened with saccharin proved valuable.

As stated before, a long period of starvation is not only unnecessary but also positively dangerous. Mild cases need not be starved at all except during the period necessary to prepare a change of food. All moderately severe and very severe cases should not have food withheld longer than twenty-four hours unless there is vomiting. Fortunately, we have a food today for this condition which is useful in the vast majority of cases. That is protein milk.

The value of Eiweissmilch has been recognized ever since Finkelstein gave this splendid food to the profession. However, the preparation of Eiweissmilch was not practical outside of hospitals. The method of preparation of protein milk has been simplified to such an extent that any one can understand it. While I have used powdered protein milk, I prefer one of the calcium caseinate preparations added to whole or skimmed cow's milk, chiefly on account of the ease of changing to a whole-milk formula as the case improves. It frequently happens that the transitional stage from protein milk to whole boiled milk is attended by a recurrence of symptoms, particularly diarrhea. In these cases lactic-acid milk has been of great benefit. The lactic-acid milk should be diluted with water at first, depending upon the age of the infant and the severity of the case, and then strengthened as rapidly as possible.

As stated before, protein milk is most useful in the majority of cases of summer diarrhea. Occasionally, however, one sees a case where protein milk does little if any good. This is due to the fact that either a putrefactive instead of a fermentative diarrhea has been present from the onset, or it develops during the course of the disease. In such a case, more benefit is obtained by the use of carbohydrates, such as decoctions of barley or rice gruel, and solutions of dextrimaltose or lactose. It is obvious that these preparations cannot be used over a long period of time because of their relatively low food value.

Owing to the large amount of nutritional disturbance accompanying these conditions, orange juice and cod-liver oil should be given as soon as possible.

As important as the proper feeding is the supplying of fluid. In mild cases where there is no vomiting, water by mouth is sufficient. When vomiting is present, or in severe cases with no vomiting, dehydration is always present, and unless combated vigorously, the patient dies. Fluid is supplied by mouth, subcutaneously, intravenously, and intraperitoneally. I regard the administration of water by the intraperitoneal route as by far the safest and best. Indeed, it is a life-saving procedure.

The technic is simple. The baby is held securely in a recumbent position, and the abdomen is cleansed with alcohol. The solution used is normal salt solution together with a 5 to 10-per-cent solution of glucose. This is heated to 110° F., and allowed to flow into the abdomen by gravity. The needle is inserted an inch below the umbilicus in the midline at an oblique angle, pointing upward. The solution is allowed to flow into the abdominal cavity until the abdominal veins become slightly distended. The amount given depends upon the degree of dehydration and the ability of the baby to take up the fluid. Many very small babies will take care of 300 c.c. at a time. After the fluid has been introduced, the needle is withdrawn and the wound is closed with collodion. The injection may be repeated every 12 to 24 hours, if necessary. Care should be taken not to introduce the solution too rapidly on account of the possible embarrassment of respiration and circulation.

Sometimes it is not advisable to use the intraperitoneal route because of persistent abdominal distention. The subcutaneous method must be employed under these circumstances. The favorite sites for these injections are between the scapulæ and both breasts. Not so much fluid can be used by this method as by the intraperitoneal route. I believe the addition of glucose or dextrose solution to the normal salt solution is beneficial in overcoming the acidosis which is usually present. Certainly it is far more practical and less dangerous than administering these solutions intravenously.

The administration of drugs is useful in combating certain symptoms as they arise. Adrenalin 1 to 2 drops of a 1:1000 solution, caffein 1/10 to ½ grain, and camphor ½ to 1 grain, are used to relieve circulatory failure. The so-called intestinal antiseptics have proved of no value in my hands. Bismuth is a most disappointing drug, and seems to have little effect in other than mild cases. Sodium bicarbonate in doses of 30 to 60 grains daily is helpful as an alkali. Most of these cases have more or less acidosis, and the excreta are often acid enough to cause skin irritation. This skin condition about the buttocks and thighs is best relieved locally by zinc oxid, powdered starch, and cold cream. Sodium bromid and chloral are the best drugs for immediate relief if convulsions develop. The spasmophilic baby must be given calcium along with other treatment. When no vomiting is present, alcohol in the form of liquid peptonoids has been of great value, particularly to bridge over the more or less long periods of anorexia which frequently accompany this condition. Opium in the form of paregoric has a distinct place in the treatment of certain cases. If the diarrhea is even moderate and there is pain and tenesmus, much suffering can be alleviated by the administration of opium. The frequency and size of the dose naturally calls for real judgment on the part of the physician. Constipating effects should be avoided.

As the bacteriology of summer diarrhea is still in a rather chaotic state, vaccines have not received a very enthusiastic welcome. I have had no experience with their use in any of my cases.

Rest is a most important factor in treatment, and should receive more consideration. These babies have very little strength, and that should be conserved to the utmost. In many cases, a gentle olive-oil rub should supplement the daily bath. As a general rule, three-hour feedings throughout the day, with one or possibly two feedings at night, are sufficient.

In conclusion I wish to present a case which illustrates some of the points of this paper.

S. E. F., male infant, six weeks old, was admitted to the hospital July 17, 1926. His mother, father, and six brothers and sisters were living and well. His delivery had been normal, without instruments. He was a 7½-months' child. His birth weight was unknown, but was estimated to be between 5 and 6 pounds. The child was breast-fed every two hours, and had five to six stools daily. His mother stated that she had plenty of breast milk, but the child cried after nursing and put his fist in his mouth. His stools were rather dark, with some fat curds. There was no vomiting. At three weeks of age, her physician told her that the breast milk did not agree with the baby, and he prescribed cow's milk 1 ounce, water 3 ounces, and 1 teaspoonful of dextrimaltose every two hours. In two days the baby began to vomit fifteen minutes after each feeding, and the stools became more frequent (10 to 12 daily), watery, and green. This formula was continued one week, after which it was changed to Dryco, 2 teaspoonfuls, and water 2 ounces every two hours. On this mixture the baby vomited after every other feeding, and the stools remained loose and green.

On admission, he presented a pitiful picture of decomposition. There was marked pallor and loss of skin turgor. His buttocks and thighs were badly inflamed. Dehydration was marked. His eyes were sunken, and he was too weak to cry. His weight on admission was 5 pounds 14 ounces. The number of stools ranged from 10 to 18 in twenty-four hours. They were green with some curds and an offensive odor. His temperature was 102° by rectum, respiration 40, and pulse 140.

The following formula was prepared: Casec ⅔ ounces, half skimmed milk 10 ounces, and water 20 ounces. Four ounces of this mixture was offered at 3-hour intervals. For the first few days his appetite was very poor, the baby taking from 1 to 2 ounces of the food. There was occasional vomiting, although this was not marked. Normal salt solution from 125 to 250 c.c., together with 50 c.c. of 10-per-cent glucose solution, was given intraperitoneally every day for eight days and then every two or three days for nine more injections. A total of 3,575 c.c. of normal salt solution and 750 c.c. of 10-per-cent glucose solution were given over a period of twenty-eight days.

The weight curve showed a rather wide range from 5 pounds 8 ounces to 6 pounds 12 ounces in a week. This rapid gain was relative, not actual, as it depended upon the time that the baby was weighed after he was given the injections. At the end of a week, the appetite had improved, and the number of stools had decreased. The baby seemed hungry, so the half skimmed milk was increased gradually to 15 ounces and the water reduced to 15 ounces. A level half-tablespoonful of granulated sugar was added to the entire formula.

The intraperitoneal injections were now being given every two or three days, and the general condition of the patient was better. Only July 30th the weight dropped to 5 pounds 10 ounces, so the food was strengthened by gradually adding cream to the half skimmed milk. The stools were much improved in character and the baby took his food well, but there was little gain. On August 4th, 1 teaspoonful of orange juice was given daily, and 15 drops of cod-liver oil twice daily.

As the weight ranged from 5 pounds 9 ounces to 6 pounds between August 1st and August 13th, the whole-milk formula was stopped, and 4 ounces of whole lactic-

acid milk with equal parts of water was given every three hours. After a few days the improvement was quite marked. The baby's color was pink instead of blue-white. The skin turgor was returning. The stools which now numbered three to four in 24 hours were normal in every respect. There was a slow but steady gain in weight. The water content in the whole lactic-acid milk was gradually reduced, and on September 7th the baby was taking 4 ounces of undiluted whole lactic-acid milk. He was discharged September 10th, weighing 7 pounds 8 ounces.

ABSTRACT OF DISCUSSION

On Summer Diarrhea

Harry Lowenburg, M.D. (Philadelphia, Pa.): It seems to me that the term "summer diarrhea" is bad because many cases occur out of season. Neither are all cases which occur in summer true dysentery. In fact most of them are not. Hence, the term may not be employed synonymously. Would it not be better to call all of these conditions acute alimentary disturbances, and distinguish between those due to food and those due to bacteria? The latter are the cases of true dysentery. The former are due to food intolerance, and often there is a symbiotic activity between food and bacteria. Food intolerance also is undoubtedly favored by summer heat.

The normal reaction of the stool of the breast-fed baby is acid, and that of the bottle-fed baby alkaline. Therefore, a bottle baby with an alkaline constipated stool is on safe ground, and every change from constipation to slight looseness and from alkalinity to acidity is an indication that the child is a potential diarrhea patient. The addition of powdered chalk to any formula on which a child develops slight acidity of the stool and slight looseness of the bowels will very frequently increase the tolerance for fat and carbohydrates. Therefore, the old-fashioned use of lime water is founded really on scientific grounds. Lime water is a diluent and an alkali, and I add five to ten grains of creta præparata to each bottle of the formula in order to change the stool from acidity to alkalinity.

Sufficient stress was not placed upon testing the reaction of the stool in the papers read. One may not speak of a fat diarrhea, a sugar diarrhea, or a protein diarrhea by reason of finding these elements in the stool. When any one of the ingredients produces diarrhea, it is safe to assume that all of the elements of the milk will be found in the stool. A purgative acts in the same way. By stimulating peristalsis, all the elements of milk are found in the stool, digested partly or not at all. Therefore, it is impossible by a macroscopic or microscopic examination of the stool to decide which element is the etiologic factor. I believe that it is much better therapeutically to take the reaction of the stool. An acid stool means fermentation, so that fat and sugar should be reduced or eliminated, and chalk added and protein increased. An alkaline stool (rare in diarrhea) means the reduction or elimination of protein, and the need of more carbohydrate or fat.

J. Claxton Gittings, M.D. (Philadelphia, Pa.): I have tried glucose intraperitoneally a number of times, and have found that it acted as an irritant. I should like to ask Dr. Rewalt about the preparation of his solution.

Dysentery, or infectious diarrhea is a specific disease in a very large percentage of cases. It is just as specific as typhoid fever, and will run its course regardless of the food used. The question of diet in dysentery, therefore, is one about which a good deal of time has been wasted, because nothing is going to digest well if there is a pronounced infection of the intestinal mucosa.

Laboratory workers stress the importance of examining a perfectly fresh warm stool in order to determine the true incidence of infection with the dysentery group. If the examination is delayed for any length of time, a large percentage of failures will result, although the organism may be present and may be the etiologic factor.

One of the authors recommends boiled certified milk. This unquestionably is the safest form of artificial food obtainable. All pasteurized milk contains on the average a million dead bacteria per cubic centimeter, and from 10,000 to 40,000 live bacteria. The plate cultures of pasteurized milk almost always show some Staphylococcus albus, colon bacillus, and Bacillus mesentericus, all of which belong to the pathogenic group. The plate of certified milk, on the other hand, almost invariably shows nothing more than perfectly harmless lactic-acid-producing organisms. If the plates ever show any staphylococci, that particular dairy herd is immediately inspected because, as a rule, some condition in the cow's udder is responsible. There is no comparison between pasteurized "market" milk and certified milk so far as feeding of babies is concerned.

Percival Nicholson, M.D. (Ardmore, Pa.): An interesting point touched upon was that diarrhea might be secondary to pyelitis, but it is equally true, and much more common, that pyelitis may be secondary to diarrhea. In many cases of diarrhea with continuing high temperature, if the urine were carefully examined several times, pyelitis would be discovered.

I take a little exception to Dr. Rewalt's statement that cow's milk with the addition of casein flour is comparable to the powdered forms of the real protein milk. Real, freshly prepared, protein milk is rather difficult to make, but the powdered preparations now on the market, which are true protein milks, are easily and quickly prepared, and are very much more satisfactory than whole milk with the addition of casein flour.

Prophylaxis in these cases is very important. Infants and children should be kept cool during the summer; and at the first onset of warm weather, the food should be very carefully diluted.

In acidosis so commonly associated with summer diarrhea, we are very apt to give either too little or too much bicarbonate of soda. A simple method of estimating the quantity is to add three drops of a one-tenth-of-one-per-cent solution of bromcresol-purple to the freshly passed urine, and when it turns purple, stop administration of the bicarbonate.

My experience has been similar to Dr. Gittings. I do not like to give glucose intraperitoneally, and think it should be given either by mouth or by injections into the bowel.

In diarrhea cases with blood in the stool, a 1:10,000 silver-nitrate solution injected into the bowel, followed by normal salt solution, is a very satisfactory treatment. By this means the blood often clears up in a comparatively short time.

Ralph M. Tyson, M.D. (Philadelphia, Pa.): Some of the worst cases of diarrhea that I saw during the past summer occurred in children who had been taken to the country for a vacation. These probably were due to several causes. The milk may have been secured from only one cow, or it may have been bacteria-laden. It has been my experience that the country abounds in just as great an incidence of summer diarrhea as the city.

I want to subscribe to the giving of normal saline solution intraperitoneally rather than giving another solution. I have had several cases in which I feel sure injury was done by the giving of glucose solution intraperitoneally.

ARTHUR M. DANNENBERG, M.D. (Philadelphia, Pa.): Not infrequently I have seen breast-fed babies treated for summer diarrhea because they had loose stools streaked with blood. I have found the loose stools to be usually normal in these babies, and on rectal examination have found the blood to be due to the presence of rectal polypi. A rectal examination is indicated in every case where there is blood in the stools.

DANIEL E. BERNEY, M.D. (Scranton, Pa.): Untold harm has been done by the administration of early purgatives in diarrhea, and the consequent dehydration which results therefrom. Intraperitoneal injection is doubtless one of the best methods of combating dehydration. Saline solution is what we are now using. We have used glucose, also glucose in combination with saline solution, but we have stopped using the glucose solution entirely, because even when used in combination with saline solution, the baby is extremely restless and apparently in pain. We have records of over 3,000 intraperitoneal injections and we are of the opinion that frequent small injections are better than large ones given over longer periods of time.

HARRY LOWENBURG, M.D. (Philadelphia, Pa.): I have used glucose intraperitoneally many times, and have seen no bad effects from it. At the Drexel Home they objected to its use. I never could understand why, because I have never seen any bad results. I was therefore much interested in the remarks of Dr. Gittings and Dr. Tyson on the subject.

EDWARD L. BAUER, M.D. (Philadelphia, Pa.): Since the intraperitoneal route for the introduction of glucose solution is of so much interest, I may say that the experience Dr. Lowenburg referred to at the Drexel Home, is quite impressive.

The glucose was put in a normal salt solution and injected into the babies, 50 to 150 mgs. in each. All of the children in this series suffered excruciating pain, and the pain was controlled only by the use of morphin. Subsequently I was impressed with the method advocated by Hess, and found that glucose could be used intraperitoneally without that discomfort. In other words, his method is to use Ringer's solution, one part, to a four-per-cent glucose solution in sterile water, one part. These children do not seem to experience the pain that they suffered by the use of a haphazard glucose-and-salt solution, because the Ringer's glucose combination is isotonic, and only an isotonic solution can safely be used.

DR. REWALT (in closing): We purposely did not take up the prophylaxis of this condition because of limited time. We realize that summer diarrhea is not a very good term and that it is open to a great deal of diversified opinion, but there were just a few points we thought worth bringing out. No attempt was made to describe the treatment of true dysentery. As stated before, the object of the paper was simply to present in a simple, concrete form measures which have been useful in a certain series of cases.

I was interested in the discussion that arose concerning the administration of glucose intraperitoneally. I, too, had been under the impression that this method was irritating, and did not use it for some time. We found that by adding it in small quantities to the normal salt solution we had no sign of any peritoneal irritation. At least, the baby to whom it was given did not seem to be any more uncomfortable than the ones to whom just a normal salt solution had been given. Of course, we had a certain amount of crying and pain for half an hour or so afterward, but it did not continue for any length of time, and we were unable to find any evidence that the glucose given in no greater proportion than one to five caused any irritation at all.

Clinical Reports *

COMPLICATIONS OF SURGICAL TUBERCULOSIS, ESPECIALLY OF THE SPINAL TYPE

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The class of surgical tuberculosis treated in the Philadelphia General Hospital is quite different from that found in ordinary hospitals, as we never see such cases in their early stages. They have been taken care of in other institutions or neglected in general practice for from one to perhaps a dozen years, and we have to deal, not with the surgical tuberculosis, but with the complications that have arisen. There are three of these complications illustrated by the following cases:

The first patient was a boy 16 years of age who began to develop trouble with his spine four years ago, after an attack of pneumonia. The condition progressed steadily until he became unable to walk, and crawled about on his hands and knees. So far as we can learn, he had no hospital treatment until about six or eight weeks before we saw him. He was then taken into one of the city hospitals, treated for a while, and sent to the Philadelphia General Hospital. At that time there was a discharging sinus over the inner side of his right thigh, and he had contractures of both legs. These legs could not be brought down straight because of the shortening of his psoas muscles and of the flexors at the hips.

The complication illustrated here is the psoas abscess. The abscess which forms in surgical tuberculosis is a cold one. If untreated, usually it finds its way slowly to the surface, but if it falls into the hands of a surgeon, generally his first thought is that "it is an abscess. We must release it, and get rid of the pus." The point is that it is not an abscess, but a collection of broken-down material, infected only with the tubercle bacillus, and even tubercle bacilli are seldom found in this pus, although if it is injected into guinea pigs it will produce typical tuberculosis in the animal, but no other form of infection.

* Abstract of papers presented at the clinical meeting of the Section on Surgery of the Medical Society of the State of Pennsylvania, held at the Philadelphia General Hospital, October 14, 1926, by members of the Staff.

There are only three indications for interference with a cold abscess: (1) when it is increasing rapidly in size, (2) when it is pointing and threatening to break, (3) when it is interfering with the health of the patient. Interference with the abscess is not justified under any other conditions. There is only one method to follow; viz., aspirate the abscess. It should not be incised, drained, or washed out. It should not be treated as an abscess because it is not an abscess.

This, then, is the first complication. The peculiarity of this type of infection is that in the vast majority of cases, if proper treatment is instituted early and followed out thoroughly, the abscess will disappear. . The following case illustrates this principle well.

I first saw the patient in the lung department. The man had an evident tuberculosis of the knee, with a profound atrophy above and below the enlarged knee and swelling of the joint, the x-ray picture showing atrophy of all the structures and a focus of trouble on the outer side of the femur and upper edge of the tibia. There was a large abscess on the outer side. We immediately applied a plaster-of-Paris cast to the leg, and maintained it in place for four weeks, during which the abscess materially lessened and the swelling decreased. It was not necessary to aspirate the abscess.

All that is needed in a cold abscess is to relieve the tension and prevent it from rupturing. The question, "why is it desirable to keep the abscess from breaking?" brings up the second point which we wish to stress. As soon as a tuberculous abscess is opened and drainage begun, mixed infection is almost certain to take place. The first case reported above was untreated. The abscess ruptured at the boy's home, and was probably dressed with some cotton or rags. It matters not, however, whether the patient is under hospital treatment or is cared for at home, it is almost impossible to prevent a mixed infection from developing in the sinus. The blood count of this boy showed 12,000 leukocytes, and he had an extensive destruction of the first, second, third, and fourth lumbar vertebræ. There had been almost complete absorption of the vertebral bodies, and from these his psoas abscess sprang. Following its rupture a mixed infection developed. This complication is the one thing which makes a cure in these cases almost impossible. It will cause profound amyloid deposits in the liver, kidneys, spleen, and all the internal viscera, and it is almost impossible to eliminate the condition in the presence of a mixed infection.

Under appropriate treatment of rest, absolute fixation, good food, sunshine, and fats, surgical tuberculosis is one of the most curable of conditions. Both of these patients had chronic fibroid phthisis, which did not interfere in the least with treatment of the local lesion. Fixation was principally relied upon to produce absorption of the detritus, and healing of the process in the second case.

The third complication is illustrated by the following case: This man was a patient in the Philadelphia General Hospital for several years. About five years ago he developed pain and increasing disability in his spine, gradually became unable to move about, and finally paralysis of the lower extremities appeared, when he was brought to the hospital. He had a small knuckle in the upper part of his back, and also there were multiple foci of infection which developed secondary to the mixed infection at the site of a ruptured abscess. Ofttimes, cases of multiple foci in a tuberculous patient come, not from the tuberculous condition, but from a pyogenic infection introduced through an incision made for drainage of the abscess. Two years ago this man could not move his legs at all. A bone graft from his tibia was placed in his spine, and he began to improve, and developed the power to move his legs. He was able to be out of bed, and everything seemed favorable for his recovery. About four or five months ago the paralysis again returned. X-rays disclosed a large mediastinal abscess, which had developed because of his low vitality and lowered resistance. On aspiration enough pus was withdrawn to show that an abscess was present, but it was so thick, so dense, and had so much disorganized tissue in large masses that the pus would not run through the trocar. Because of the increasing paralysis, drainage was secured by surgical means. A simple tuberculous abscess in this part would not be an occasion for any special concern, and aspiration would be the only procedure necessary, but mixed infection is one of the most serious and troublesome complications.

In this case the paralysis was caused primarily by invasion of the spinal canal by the epithelioid cells of the granulation tissue thrown out by the tuberculous processes. These cells—the so-called "white swelling" of surgical tuberculosis—made pressure upon the cord, and shut off all impulses. In such cases, if the granuloma breaks down, it will form an abscess which may continue the pressure if it remains within the canal. Secondary degeneration of the cord naturally will take place under the influence of pressure, but the pressure rarely develops from the occlusion of the spinal canal by reason of the deformity

present. Sometimes the pressure of the developing granulation tissue on the cord causes a secondary invasion of the cord itself by the tuberculous process which results in paralysis.

These, then, are the three points which we have stressed: (1) The formation of an abscess is one of the least disturbing complications of surgical tuberculosis. It should not be opened unless one of the three conditions described above is present. (2) A mixed infection cannot be prevented in cases with an open sinus. (3) Paralysis occurring in spinal cases practically always disappears after the first attack under appropriate treatment. By this we mean first, rest; second, more rest; and third, still more rest and absolute fixation. Functional as well as physiologic rest of the parts is essential. Some authors claim that a patient may be allowed weight-bearing because the weight is thrown on other parts. I have not found it so, and have seen many cases where fixation is done and weight-bearing permitted in which there is formation of abscess and breaking down of tissue. Surgical fixation by bone graft or osteoplastic operation is a great advantage in these cases, as it produces absolute fixation, and the patients recover satisfactorily.

Last year I saw a boy who was paralyzed. He had a deformity of the spine similar to that in the first case reported, a tremendous kyphosis, and an abscess which filled the entire right side of the abdomen. The intestines and abdominal viscera were crowded to the left side. I applied a plaster-of-Paris cast in firm extension and kept him in bed all summer. The abscess gradually disappeared, and at the present time there is no evidence that it was ever present; yet had he been tapped at first, over a quart of pus or broken-down material could have been removed. The paralysis is gone, the boy has been fitted with an appropriate brace, and is now walking around. He will have to wear a brace for the rest of his life, or until a locking of the bodies of his vertebræ takes place. If nature will accomplish this, operation will not be necessary.

ABSTRACT OF DISCUSSION

QUESTION: In these cases of abscess with paralytic symptoms, is tuberculous meningitis a frequent development?

DR. RUGH: You do not have it in the early or active stages of paralysis, but in these cases of surgical tuberculosis that is commonly the end. Mixed infection or other factors break down the resistance of the patient and easily permit dissemination, and then meningitis is very apt to occur. Patients with paralysis will practically always recover after the first attack if they are properly treated.

QUESTION: Is any medical treatment given in these cases?

DR. RUGH: There is no medical treatment, except along general lines, that will be of any special avail. Good food, the same treatment as we follow in the pulmonary types, and measures to improve the resistance of the patients are the essentials. Vaccines, tuberculin, serums, and so on, have been used, but they have not been shown to give uniform or better results than can be obtained with sunlight, good food, and building up of the patient.

QUESTION: In the second case reported, how long was the leg kept fixed?

DR. RUGH: Until the abscess practically disappeared. Then the knee was resected or arthrodesed. If the knee had been extremely painful or if it had been interfering with the health of the patient, I should have considered but one thing—amputation. In the adult, it is always necessary to look upon the economic side, and to consider the years required for recovery. In the wage-earner, one is justified in sacrificing a leg, because in six months the individual can be independent. A pulmonary lesion is no contraindication to operation on the outlying parts.

QUESTION: What anesthetic do you use?

DR. RUGH: Gas or chloroform, mostly gas. We do not use ether. It is wonderful how such patients stand surgical intervention. A year ago a woman was referred to me who had been bed-ridden for over two years with a tuberculous knee and lungs. She also had a mixed infection in many discharging sinuses about the knee, causing intense pain. I amputated her leg, and in two weeks she was up in a wheel chair. Today she is walking around. She gained weight as soon as the mixed infection was eliminated from her system, and is recovering entirely from her pulmonary lesion.

ANTEPARTUM HEMORRHAGE DUE TO SEPARATION OF A NORMALLY IMPLANTED PLACENTA

CLIFFORD B. LULL, M.D.
PHILADELPHIA, PA.

Last year, during one period of six weeks we did ten cesarean sections. Three of these presented rather unusual and interesting features. They were cases of antepartum hemorrhage caused by separation of a normally implanted placenta. This condition is rather rare, so that it is unusual for three such cases to come into one hospital service within six weeks. My own records show that since 1918 I have seen and operated upon only five other similar cases.

The three hospital cases presented rather desperate symptoms. The one of most interest had the following history:

She was 42 years of age, her past medical history was negative, and she was, at the time of admission, within two weeks of full term. She had had nine spontaneous births and there was no history of toxemia either in the present pregnancy or any of the preceding ones. This patient was admitted to the hospital at 7 a.m., after being in supposed labor for three hours. She had been awakened during the night with what she thought were labor pains. At the time, the students who would ordinarily have been sent out on the case,

were out of the city, and she was seen by one of our assistants, who immediately recognized the abnormality and made the correct diagnosis. At the time she was seen at her home, there was no sign of external hemorrhage, but when I saw her an hour later, she was having definite vaginal bleeding. The picture presented was rather obvious: an adult woman who looked beyond her years—she appeared to be 55—who evidently had had a hard, tedious life, having children at frequent intervals. There was definite pallor, air hunger, and the skin was cold and clammy. Her systolic blood pressure was 84, and pulse 150. The uterus was enlarged, very tender, and firm. Vaginal examination showed a cervix high up in the vagina, and no dilatation or effacement.

The patient was prepared for immediate abdominal section, and a transfusion was given at the same time the operation was started. Upon opening the abdomen, a typical condition of the uterus in these cases of premature separation was seen. The tissues were white in the abdominal wall, and the uterus had the typical mottled, grayish-green color. Upon opening the uterus, the entire placenta was found to be detached, except a small area about the size of two silver dollars. The child was removed and, much to our surprise showed definite evidences of being alive.

After evacuating the uterus, it gave no indications of contracting, and I felt that the patient had more chance of getting well by doing supravaginal hysterectomy than by taking a chance on hemorrhage and the condition of the uterine circulation. Hysterectomy was done as quickly as possible, as the woman was in a very precarious condition. The baby lived, and much to our surprise, the mother made an uneventful recovery. I think she made a better recovery than some of the patients upon whom hysterectomy was not done.

The pathologist said at the time the uterus was delivered to him that, macroscopically, he suspected it had been obtained at autopsy from a patient dying of puerperal infection. The pathologic diagnosis was parturient uterus, infarction of the placenta, two-thirds of which was separated, and marked necrobiosis and degeneration of the uterine musculature.

The other two patients were not in quite such severe shock. Both of them, however, showed some signs of a mild toxemia. The one was taken ill in a department store, and was brought to the receiving ward of the Jefferson Hospital. She was not one of our outpatients. The diagnosis of placenta prævia was made by the admitting physician, but careful examination proved this to be incorrect. She was immediately sectioned. The baby was dead, and the entire placenta was separated. In this case, the uterus contracted well after evacuation, and was allowed to remain *in situ*.

The third patient was admitted to the wards, supposed to be in active labor. She had a slight elevation of blood pressure and a faint trace of albumin in the urine. Within an hour after admission, the nurse discovered what she thought to be more than a normal amount of bleeding from the vagina, and although the patient had definite uterine contractions, she did not seem to be far enough advanced to cause laceration and give rise to bleeding. In this case, I examined and found she had four fingers' dilatation, with a completely effaced cervix, a moderate amount of hemorrhage, and was in fairly good general condition. This was a case where probably delivery by version would have been satisfactory, but she had an internal conjugate of seven centimeters, with the head not engaged. With this condition occurring in a primipara, I felt that we had two indications for abdominal delivery. The woman's membranes had not been ruptured. We performed section and obtained a living child weighing over eight pounds. She convalesced satisfactorily.

These cases are rather unusual because of the fact that they occurred in such a short space of time. We usually see one or two a year in the three hospitals with which I am connected, the Philadelphia General, the Jefferson Hospital, and the Philadelphia Lying-In. During the past year, we have had only one case at the Lying-In. That case ended fatally. The patient was waiting in the hospital, and suddenly developed abdominal pain which was not recognized by the intern for several hours. The hemorrhage in this case was tremendous, and the patient died of shock.

These uteri, if they are not taken out, have a tendency to relax and cause postpartum hemorrhage. I recall a primipara, seventeen years old, upon whom I operated, and although the uterus looked very bad, I did not take it out because of her general condition. She had a very stormy convalescence, and was in the hospital about three months before she finally recovered.

This condition was formerly thought to be due to traumatism, but it has been very definitely proved that these patients suffer from a type of toxemia which is the basic etiologic factor. I believe we are all agreed that toxemia is the cause. A peculiar thing, however, in looking over the cases which I have personally seen, is that the first three had a very definite history of being kicked in the abdomen. The mortality rate, of course, is very high for the children, likewise for the mothers, unless they are seen early.

There is no question in my mind that cesarean section offers the best chance, and if the uterus presents the typical necrobiotic appearance, it had better be removed at the time of section. We operated upon these patients under ether anesthesia, and wasted no time in doing the operation. At the same time, the patient was being transfused.

The other cases occurring during the past six weeks which demanded section were not of so much interest as these three. Two were central placenta prævia occurring in primiparas, where cesarean section was the method of delivery. The rest were contracted pelves, all of them being primiparas except one, which may be of interest to you.

I performed cesarean section upon this patient three years ago. She had been brought in at that time after having been in labor for forty-eight hours with a transverse position and multiple fibroids. A diagnosis of ruptured uterus was made upon admission. The operation at that time was done with difficulty because of the numerous nodules in the anterior wall of the uterus. The patient's condition was quite serious, and as the

rupture was slight and the membranes intact, I repaired the wound in the wall after evacuating the uterine contents. She made an uneventful recovery. Three weeks ago I operated upon this patient again for a pregnancy at full term. I did not allow her to go into labor, feeling that with multiple scars in the uterus, and with a very large child, there was definite danger of rupture. We found at the second operation that the uterine closures had healed with good union. She made an uneventful recovery.

ABSTRACT OF DISCUSSION

QUESTION: What form of anesthesia do you use?

DR. LULL: In these cases we used general anesthesia. We are doing some work under local. We have not used a great deal of gas, but not because we disapprove of it. In our experience, ether has been as satisfactory as any when it is given by various anesthetists.

In these cases, the high operation was done. They were all clean cases, none of them having been handled on the outside. If they had been, we should probably have done the low operation.

1731 Pine Street.

PLASTIC SURGERY OF THE FACE

ROBERT H. IVY, M.D.
PHILADELPHIA, PA.

I wish to report two cases in which practically total restoration of the nose was done, one of them for a defect due to syphilis and the other for a defect following treatment of a supposed cancer by a plaster. After the use of the plaster practically the entire nose sloughed off.

In any serious defect of the nose or other part of the face, it is advisable before operating to plan out exactly what is to be done, and the planning is aided if a plaster-of-Paris cast of the face is first made. The defective nose is then built up in wax or clay upon the cast. The dimensions of the clay nose on the cast are measured to form a pattern on paper and then in tin foil which can be used at the operation to give the definite size and shape of the flap to be

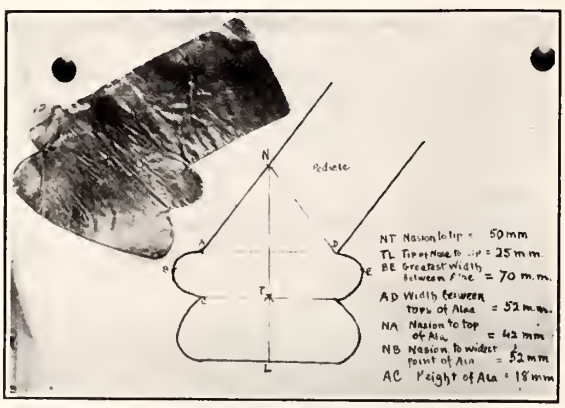


FIG. 1.—Paper and tin-foil patterns of forehead flap for fashioning new nose. Measurements plotted on paper: N-T, nasion to tip; T-L, tip to lip; B-E, greatest width between alæ; A-D, width between tops of alæ; N-A, nasion to top of ala; A-C, height of ala.

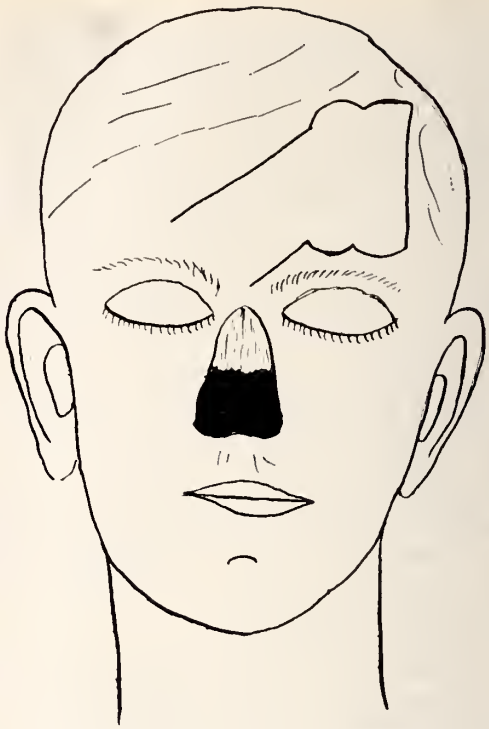


FIG. 2.—Position of flap on forehead.

employed. (See figure 1.) In forming a new nose or major part of a nose, I believe the best tissue to use where possible is the forehead skin and subcutaneous tissue. This skin is more like the normal skin of the nose than skin from anywhere else, and the flap has a good blood supply. The forehead defect can usually be very readily covered with a free skin graft from somewhere else, or even if it is allowed to heal by granulation after joining the edges as nearly as possible, the scar will not be very conspicuous. The patient, if a woman, can drape the hair over it.

The operative procedure is divided ordinarily into three stages, with a two- or three-week interval between each. At the first operation, the tin-foil pattern is applied to the patient's forehead, with the pedicle portion slanting up from the inner third of one eyebrow toward the opposite side of the forehead so that the main portion of the pattern lies horizontally. The pedicle, therefore, receives blood from the supraorbital and angular arteries. The pattern is carefully placed so that when the flap is rotated downward 90 degrees it will come into proper position to form the new nose. The forehead flap, limited to the skin and subcutaneous fat, is outlined and raised back to its pedicle at the eyebrow. All bleeding is controlled, and the flap sutured back into its original bed for delayed transfer. (See figure 2.) It is believed that we get better cir-



FIG. 3.—Under surface of forehead flap, showing method of folding distal end to form columella and lining of alæ.

culation in the flap in that manner than by bringing it down immediately. If the flap is going to slough it is better to have it slough on the forehead than after bringing it down to its new position.

At the second operation, all soft-tissue remnants of the original nose are removed, and the skin margins of the nasal defect freshened. The forehead flap is raised, and the distal end folded to form the columella and lining for the alæ (see figure 3), the folds being secured by catgut sutures. The flap is then rotated 90 degrees on its pedicle, and securely sutured into the nasal defect. The raw surface on the forehead is immediately covered by a full-thickness skin graft from the abdomen. (See figure 4.)

At the third operation, two or three weeks later, the pedicle of the flap is divided, and the raw edges neatly sutured. (See figure 5.) This particular method of forming the forehead flap was devised by V. P. Blair, of St. Louis.

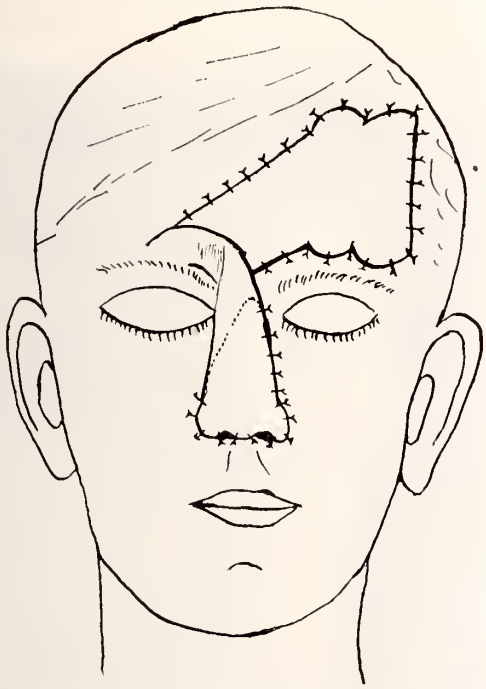


FIG. 4.—Forehead flap rotated and sutured into nasal defect. Raw surface on forehead covered with full-thickness skin graft from abdomen. Dotted line shows position of incision for division of pedicle later.

Much has been said and written about the necessity for using bone or cartilage in connection with the forehead flap as a support to reproduce the natural prominence of the tip of the nose.

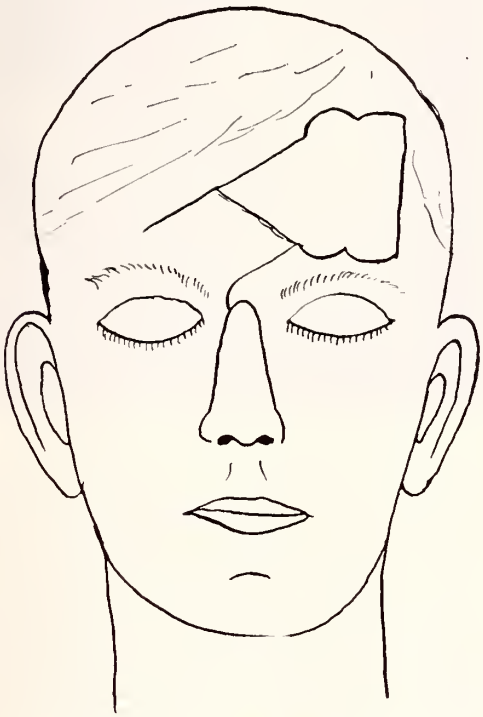


FIG. 5.—Pedicle severed and returned to forehead.

By the infolding of the distal end of the flap according to the method described to form the columella and line the nostrils, in the majority of cases the natural prominence of the tip will be maintained without any additional cartilaginous or bony support. Occasionally, there will be a slight depression over the dorsum of the new nose, where cartilage can be inserted to advantage. It is preferable to insert the cartilage beneath the skin of the new nose as a finishing touch rather than to place it beneath the flap on the forehead before it is brought down, as it is much more easy in the former case to judge of the proper size, shape, and position to be given the cartilage.

The first case described was that of a woman fifty years of age who had a healed syphilitic lesion presenting complete absence of cartilaginous and bony septum, columella, tip, and most of the alæ of the nose. The remains of the nasal bones were depressed and covered with scar tissue. There was also destruction of most of the soft palate, causing a speech defect. The Wassermann reaction was negative. In April



Fig. 6.—Profile view of case 2 before operation.



Fig. 7.—Front view of case 2 before operation.

and May, 1925, the nose was reconstructed by a forehead flap, according to the technic described. Later, two pieces of costal cartilage were inserted to correct a slight depression of the bridge of the nose. The raw surface on the forehead was immediately covered with a full-thickness skin graft from the abdomen, which took completely. The patient now has a well-formed nose, through which she can breathe, and has discarded the heavy veil which she had previously worn constantly to hide her appearance. Speech has been corrected by an artificial denture which replaces the missing soft palate.

The second patient was a woman of about 40 years of age who was first seen in February, 1926. She stated that for about two years she had had a small growth on the nose and one on the forehead, and that a year previously a plaster had been applied to the nose and to the forehead by a "cancer specialist." Following this, prac-



Fig. 8.—Profile view of case 2 after operation.



Fig. 9.—Front view of case 2 after operation.

tically the entire nose sloughed, so that when seen by me all of the nose was absent, including the nasal bones, the only parts left being a small portion of the columella and some of the back part of the septum. (See figure 6.) In addition, there was a thick scar extending from the edge of the nose defect into the right cheek, producing ectropion of the lower eyelid, and a vertical scar in the middle of the forehead. The edges of the defect were entirely healed. (See figure 7.) The Wassermann reaction was negative.

Using the technic described, the nose was reconstructed from a forehead flap; the forehead scar, although running directly across the pedicle, fortunately did not interfere with nourishment of the flap. Owing to the cheek scar, it was not possible to obtain a neat union of the flap on that side, and I had to fold down the pedicle to close the opening here. On the whole the result is good. She has nostrils through which she can breathe. In this case it has been unnecessary to use any cartilage or other supporting tissue, and it will be observed that the bridge is prominent. The forehead defect has been satisfactorily covered by a full-thickness skin graft from the abdomen. (See figures 8 and 9.)

ABSTRACT OF DISCUSSION

Question: Although the Wassermann is negative, if there is any tendency to sloughing do you go on?

Dr. Ivy: No, if there is any tendency to sloughing and active syphilis is suspected, even though the Wassermann is negative, we wait until thorough treatment has been carried out. In some cases with no active lesions but where the Wassermann is persistently positive in spite of thorough treatment, we consider it safe to proceed with the operation.

Question: Is cartilage absorbed?

Dr. Ivy: I have not observed any marked absorption of cartilage. I think it is far more permanent than bone for supporting the nose. Foreign substances, such as ivory, celluloid, etc., have been used, but they are likely to give rise to trouble later, and if so are almost sure to be lost, whereas if cartilage is once made to heal in place it will stay there.

Question: Do you allow for shrinkage in flaps?

Dr. Ivy: In this nasal flap we allow very little for shrinkage because the distal end of the flap is doubled over and the upper part sutured under some tension, so that there can be very little shrinkage. Full-thickness free skin grafts particularly should not be cut any larger than the defect. They should be a little smaller if anything, so that when sutured in place the capillaries and lymph spaces will be held open by the tension.

Question: Is there any limit to the size of a free skin graft?

Dr. Ivy: Theoretically no, because each part of the graft receives nourishment from the tissue directly beneath it.

1503 Medical Arts Building.

Case Report *

ACUTE LYMPHATIC LEUKEMIA WITH ATYPICAL TERMINAL SYMPTOMS

EDGAR S. BUYERS, M.D.
NORRISTOWN, PA.

M. S., white female, aged 14, was admitted to Montgomery Hospital, Norristown, on August 5, 1925. The family history was entirely negative. The patient had never been ill except for a mild attack of influenza in 1918, with a good recovery. Six weeks before admission she was suddenly taken ill, felt exhausted and weak, was unable to play and was contented to lie about the house, but had no pain.

Upon admission, it was noted that the skin and mucous membrane were extremely anemic. The respiration rate was 24, temperature 100 2/5°, and heart rapid, 136, not enlarged, and with no murmurs. The lungs were normal except for fine crepitant râles at the right apex. The abdomen was moderately distended, the spleen greatly enlarged, occupying almost the whole left abdomen. The liver was palpable three finger-breadths below the costal border. There was no enlargement of the lymphatic glands, except one small inguinal gland.

The urine showed no sugar, a trace of albumin, and no casts. Blood examination on admission showed: red cells 2,496,000; hemoglobin 38 per cent; leukocytes 33,800—polynuclears 11 per cent, small lymphocytes 30 per cent, and large lymphocytes 59 per cent. The red cells showed a moderate degree of poikilocytosis and anisocytosis.

The patient gradually became weaker during the next six days. The temperature ranged from normal to 105°, with profuse hemorrhages from the nose which required packing, also hemorrhages from the stomach and bowels. On the sixth day after admission her blood count was: Red cells 1,472,000; hemoglobin 30 per cent; leukocytes 24,500—polynuclears 4 per cent, small lymphocytes 33 per cent, large lymphocytes 63 per cent.

Three days later the patient became much worse, complained of great pain in the abdomen, which was greatly enlarged and tympanitic. The abdomen gave every appearance of an acute surgical condition, was boardlike to touch, with great tenderness on pressure, and an apparent emphysema of the muscles, much like that noticed with a punctured pleural cavity.

*Read before the Section on Medicine of the Medical Society of the State of Pennsylvania, Philadelphia Session, October 14, 1926.

A prominent Philadelphia surgeon was in the hospital at the time, and was invited to see the case, and so great was the surgical appearance of the abdomen that he strongly advised operation, saying it was an acute abdomen, probably from a ruptured viscus. This, however, was not done as we felt the patient was too ill.

Her blood count at this time was: red cells 1,104,000; hemoglobin 20 per cent; leukocytes 5,200—polynuclears 0, small lymphocytes 20 per cent (500 counted), large lymphocytes 80 per cent.

The patient died six hours later in great pain, after being in the hospital nine days.

AUTOPSY REPORT

Body pale. Peritoneum—white and glistening; no free fluid; no free air. Stomach—greatly enlarged; filled with gas and fluid. Kidneys—enlarged; capsule stripped easily; pale in color; surface studded with small miliary masses. Cut surface showed cortex enlarged, with a few scattered miliary masses.

Heart—slightly enlarged; flabby; pale in color; valves normal. Right lung—few pleural adhesions; upper apex showed small tuberculous area. Left lung—normal.

Intestines—normal. Spleen—15 cm. by 35 cm. (6x14 inches); very dark red; soft; no miliary masses.

Microscopic findings—hyperplasia of lymph cells with passive congestion. Liver—23 cm. by 23 cm. (9x9 inches); pale in color; few scattered miliary masses which microscope showed were leukemic masses and not tuberculous areas.

The crepitation felt over the lower abdominal muscles was undoubtedly due to the enormous dilatation of the stomach. There was no surgical condition present.

The unusual features of this case were (1) The progressive decrease of the polynuclear cells from 11 per cent to 0, with a progressive increase of the lymphocytes, they alone being present in last count. (2) The progressive decrease in the total leukocytes from 33,800 to 5,200. (3) The enormously enlarged spleen, 6x14 inches. (4) The apparent surgical condition of abdomen with emphysema of abdominal muscles. (5) The absence of lymph nodes, notwithstanding the great enlargement of the spleen.

This case is in accord with many authorities who say the preponderance of large lymphocytes indicates the acuity of the disease. Acute lymphatic leukemia may surely be looked upon as malignant tumor of the blood.

VIRGINIA'S STERILIZATION LAW VALID

The authority of the State of Virginia to order the sterilization of mental defectives was upheld by the United States Supreme Court in an opinion handed down, May 2d, by Associate Justice Holmes for the majority of the court. The case was that of Carrie Buck, a feeble-minded white woman, committed to the Virginia State Colony for Epileptics and Feeble-minded. Her mother, also feeble-minded, is in the same institution. Carrie Buck, now about 21 years old, is the mother of an illegitimate feeble-minded child. The guardian for the young woman brought the action against the Superintendent of the colony to prevent the operation of salpingectomy.

The Circuit Court of Amherst County had ordered it performed in accordance with the Virginia State law, and the Supreme Court of that State affirmed the lower court. The case came to the United States Supreme Court's finding, the contention being made that the Virginia law was void under the Fourteenth Amendment because it denied the woman due process of law and the equal protection of the laws.

"It is better for all the world," Justice Holmes said in the decision, "if instead of waiting to execute degenerate offspring for crime, or to let them starve for their imbecility, society can prevent those who are manifestly unfit from continuing their kind."

The principle sustaining compulsory vaccination was broad enough to cover the proposition of sterilization, Justice Holmes declared.

Associate Justice Butler noted a dissent from the majority decision, but did not hand down a written opinion.

The Virginia Act, Justice Holmes declared, recited that the patient's health and society's welfare might be promoted in certain instances by sterilization of mental defectives under careful safeguard. The sterilization, the opinion stated, could be carried out without serious pain or substantial danger to life. The State of Virginia, it was asserted, supported many defectives in various instances, who, if discharged now, would become a menace, but who, if sterilized, might be set at liberty.

"The very careful provisions" by which the act protected the patients from abuse were referred to by Mr. Holmes. "These provisions," he wrote, "include requirements for public hearings, reduction of all evidence to writing, appeal to the Circuit Court of the county, and finally appeal to the highest court of the State."

"There can be no doubt," the Justice added, "that so far as procedure is concerned, the rights of the patients are more carefully considered, and as every step in this case was taken in scrupulous compliance with the statute and after months of observation, there is no doubt that in that respect the plaintiff in error has had due process of law."

Dealing with the contention that under no circumstances could an order for sterilization be justified, Justice Holmes stated:

"In view of the general declarations of the Legislature and the specific findings of the Court, obviously we cannot say as matter of law that the grounds do not exist, and if they exist they justify the result. We have seen more than once that the public welfare may call upon the best citizens for their lives. It would be strange if it could not call upon those who already sap the strength of the State for these lesser sacrifices, often not felt to be such by those concerned, in order to prevent our being swamped with incompetence."

Taking up the contention that the argument for sterilization failed when confined to the small number who are in institutions, and not applied to the "multitude outside," Justice Holmes said:

"It is the usual last resort of constitutional arguments to point out shortcomings of this sort. But the answer is that the law does all that is needed when it does all that it can; indicates a policy; applies it to all within the lines, and seeks to bring within the lines all similarly situated so far and so fast as its means allow."

The Virginia Supreme Court held that Carrie Buck "is the potential parent of socially inadequate offspring, likewise afflicted; that she may be sterilized without detriment to her general health; and that her welfare and that of society will be promoted by her sterilization."—*New York Times.*

Pittsburgh

L. G. BEINHAUER, M.D.
Chairman, Publicity Committee

Pittsburgh, known at home and abroad as the "workshop of the world," has expressed its civic pride by developing many beautiful residential sections of which the Schenley Farms is representative. The profits derived from her steel and iron have been returned and utilized for the encouragement of education, art, and science, as well as recreation, in order that the city might become a better place in which to reside.

Situated within the Schenley Farms district are many nationally known institutions and buildings. Conveniently bounded by Center Avenue, Craig, Darragh, and Forbes Streets, this section has enclosed a "golden square" comparable to the "golden triangle" of the downtown section. Traversing this square are the main highways, Forbes Street and Fifth Avenue, upon which are situated its most important landmarks. On Forbes Street facing the future "Cathedral of Learning" is the magnificent entrance to Schenley Park—one of the largest public parks in the State—a gift to the city of Pittsburgh from the family whose name it bears. This park contains numerous picturesque drives, small lakes, private bridle paths; the Phipps Conservatory, one of the largest in the world, whose annual "Easter Flower Shows" have attracted national attention; a public race track, modern in equipment, and the home of amateur horse racing, sponsored by the Schenley Matinee Club.



PHYSICIANS' BUILDING

At 121 University Place, near the headquarters for the State Society meeting. Owned entirely by the physicians whose offices are located therein. Cut by courtesy of H. Samson Co.



MEMORIAL TO WORLD WAR VETERANS

Erected in Schenley Park by the Allegheny County Medical Society. Cut by courtesy of Kramer's Restaurant.

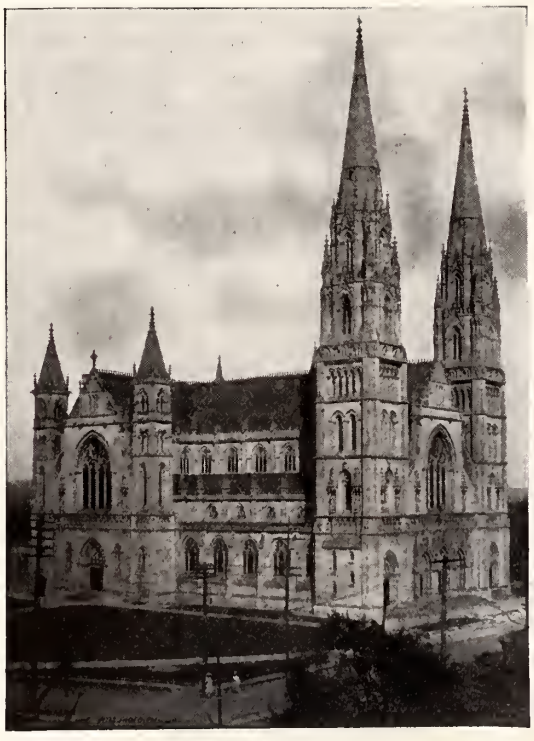
Flanked on one side of the Forbes Street entrance is Forbes Field, the home of the Pittsburgh Baseball Club, and named in honor of General Forbes who marched over this site on his way to Fort Duquesne during the French and Indian War. On the other side is the magnificent Carnegie Library Building, a gift to the city from the late Andrew Carnegie, housing one of the world's largest public libraries, extensive art galleries, a nationally known museum, and a music hall and lecture hall at which public concerts and lectures are given throughout the year. The annual International Art Exhibition is held within this building each year and is

ranked as the foremost art exhibition in the world because of its world-wide competition.

Within the bounds of Schenley Park is the Carnegie Institute of Technology (the branch for women being termed the Margaret Morrison School), housing a nationally recognized university of art, science, drama, and especially engineering. On the opposite side of the entrance is the home of the future "Cathedral of Learning," the Hotel Schenley, and the Schenley Apartments, the former a landmark of Pittsburgh hostelries, which will be the official headquarters for the coming session. Directly behind these buildings and facing on Fifth Avenue is the Soldiers Memorial Hall, erected by the taxpayers of Allegheny County in memory of soldiers, marines, and sailors who served in the Civil War. Further, eastward along Fifth Avenue, is the Pittsburgh Athletic Club, long a leader in social and athletic activities. This building is surrounded by the Masonic Hall, the home of Masonry in Pittsburgh, and Syria Temple A. A. N. M. S., a striking piece of Arabic architecture containing the largest auditorium in the city, and it is the home of Pittsburgh Shrinedom. Looking westward from Memorial Hall are the Physicians' Building—an office building for doctors of medicine; the University Club, having a membership of 1,500 (also headquarters for the coming session), and the newly erected National Fire Insurance Building. Scattered along the brow of the hill facing Center Avenue are numerous buildings—medical, art, science, dental, and administration—of the University of Pittsburgh.



BELLEFIELD PRESBYTERIAN CHURCH
Located at Fifth and Bellefield Avenues, Pittsburgh. Cut by courtesy of H. Samson Company.



ST. PAUL'S CATHEDRAL
Located at Fifth Avenue and Craig Street, Pittsburgh, near the headquarters for the State Society meeting. Cut by courtesy of H. Samson Company.

Located on Fifth Avenue between Darragh and Atwood Streets is the old Porter estate, now known as the "Health Center" of the University of Pittsburgh School of Medicine. Upon this property will be erected a unit of medical activities including the Children's Hospital recently erected, having a capacity of 200 beds, the Presbyterian Hospital, and future necessary medical buildings. Within a stone's throw the new Montefiore Hospital is now under construction to complete this unit. Scattered throughout this section are many beautiful residences and apartment houses which add to the scenic beauty of this district. Within this section are numerous churches whose architectural beauties are worthy of mention. One need only visit St. Paul's Cathedral, the Bellefield Presbyterian Church, the Church of Ascension, the First Baptist Church, the German Evangelical Church, and Rodef Shalom Temple to appreciate the real beauty of this part of the city. Should one care to spend the time, an hour's walk through this district would give a never-to-be-forgotten impression of numerous examples of exquisite beauty and splendor confined within a short space.

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Editorials

THE TRICHINOSIS OUTBREAK IN PENNSYLVANIA

Within the past few months two widely separated epidemics of trichinosis occurred in Pennsylvania. Both of them were caused by the eating of trichina-infested sausage which had been insufficiently cooked.

The first outbreak occurred among the students at the Seminary of the Reformed Church of Lancaster. Three patients were taken to the Lancaster General Hospital, and were tentatively diagnosed as suffering from typhoid fever. Later investigation revealed trichinosis, and laboratory tests confirmed the findings.

The source of infestation was traced to one of six live hogs which were purchased from a large stockyard in the western part of Pennsylvania. They were bought by a Hungarian storekeeper of Zelienople who, in turn, sold them to customers by whom they were killed and dressed. Apparently the meat from the first five of the six hogs slaughtered had been properly cooked or it did not contain parasites, as it was eaten by ten adults and twenty-one children, with no one becoming ill. A portion of the sausage from the sixth hog was given to a neighbor, who forwarded some of it to one of the students at the Seminary, where it was eaten raw by him and six others.

The other epidemic occurred in Weatherly, Carbon County. A butcher imported a registered boar from New York in 1924. The hog was butchered the latter part of February, 1927, and the following day, scrapple, sausage, and other pork products were prepared. Three women and one man prepared it and ate some of it raw, all becoming ill within five or six days. One of these died.

The sausage and liver pudding were sold to several families, who ate the meat raw, and developed four cases of trichinosis. Every one who was known to have eaten these pork products in a raw state developed the disease.

Originally these cases were reported to the State Health Department as typhoid fever. Department investigations, however, together with laboratory tests, indicated trichinosis.

A bulletin recently issued by the Department of Health on this subject stated:

> The consumption of pork and pork products in the United States is enormous. And with the one reservation that too much meat of any kind is bad for an individual, there is no reason why people who like it should not continue to eat this kind of meat.
>
> However, according to the United States Bureau of Animal Industry, "no method of inspection has been devised by which the presence or absence of the trichinæ in pork can with certainty be determined. Government meat inspection therefore does not include an investigation for this parasite." In view of this fact it is necessary that people should understand the possible danger of infection.
>
> All persons are accordingly warned not to eat pork or sausage containing pork, whether it has been officially inspected or not, until after it has been properly cooked. Pork when properly cooked may be eaten without danger of infection. Fresh pork should be cooked until it becomes white and is no longer red in color in all portions of the piece, at the center as well as near the surface. Dry salt pork, pickled pork, and smoked pork, salted or pickled, providing the curing is thorough, are practically safe so far as trichinosis is concerned, but as the thoroughness of the curing is not always certain, such meat should also be cooked before it is eaten!
>
> In view of the fact that in each of the Pennsylvania epidemics people lost their lives, and the patients fortunate enough to live endured a long and painful illness, ought in itself to be sufficient to urge every housewife to get plenty of fire under pork and pork products before she brings them to the table.

Trichinosis develops suddenly with abdominal pain, vomiting, diarrhea, headache, or chills as the first evidence of illness. The two principal symptoms of the disease are diarrhea and mus-

cular pains. The diarrhea rapidly becomes profuse, the stools are frequently black and very offensive, later becoming slightly blood-streaked or mucous. The combination known as typhoid symptoms are commonly found in trichinosis. The fever is typhoidal in character, the tongue coated, the lips dry and may have sordes, the pulse is markedly dicrotic. There may be some abdominal distention, but this is not apt to occur. With high fever there may be delirium. Rose spots and enlarged spleen may be found in trichinosis; both were present in one of the recent cases of trichinosis herein described. One of the fatal cases, complicated with epilepsy, a partially removed goiter, and a heart disorder, had a pulse of the typical Cheyne-Stokes type.

The muscle symptoms of trichinosis are characteristic, and are apt to begin from the second to the fourth day. The pain may resemble a generalized myalgia, or may be localized. The muscular symptoms are caused by the deposition of the trichinæ in the muscles, and their character apparently depicts the stage of development of the parasite: painful at first with the invasion of the muscles, later tenderness, and then stiffness, as the trichinæ become encysted. Any muscle is apt to become involved, but most frequently those of the arms and legs. The extrinsic muscles of the eyeballs may be involved, the tongue, the pharyngeal muscles, cheeks, neck, intercostals, or diaphragm. The biceps, with pains located just above the elbow, and the muscles of the abdomen and thigh, are the others seemingly most involved. The muscles become tender on rubbing, and give pain on use or upon extension. They later become stiff. The parts involved may not be symmetrical.

The incubation period of trichinosis is short, mostly five or six days in the cases here described.

The diagnosis of trichinosis is made substantially after laboratory confirmation. The disease is chiefly confused with typhoid fever, but may also be diagnosed as rheumatism or intestinal grip. The distinguishing points which differentiate trichinosis from typhoid are the sudden onset, profuse diarrhea, and muscular pains, and the presence of general typhoid symptoms. Particularly should trichinosis be considered when a typhoid suspect is found lying with arms flexed and complaining of pain upon extension. With this combination of symptoms, inquiry should be made in regard to the recent eating of pork, chiefly raw pork or smoked sausage. If such a history is obtained, and even in its absence, a blood smear should be made for a differential count to determine the presence of eosinophilia. There is a marked rise in the eosinophilic count, which persists after the cessation of symptoms, although late in the attack the blood picture shows the changing of the eosinophils to basophils, but the percentage of these stippled cells will be high. Eosinophil counts up to 42 and 47 per cent were obtained in the cases here related.

Specimens of any pork sausage or other raw-pork products from which the patient has eaten should be sent to a laboratory for examination. A piece of deltoid muscle removed from one of the Lancaster patients was found to contain trichinæ. In case of fatality from trichinosis, an autopsy is advisable; and pieces should be obtained from the particular muscles of which the patient complained as being painful.

In treatment, recent suggestions have indicated the value of neoarsphenamin, or a similar drug, as a parasiticide, but such treatment should probably be administered as early as possible and before the stage of encysting has commenced.

Trichinosis in most states is a reportable disease. Cases should be reported immediately, as state departments of health and state departments of agriculture are interested in locating all cases, that action may be taken to prevent the spread of the infestation. Hospitals should report all cases irrespective of any diagnoses made before admission of the patients.

SUMMER DIARRHEA IN INFANTS

In this number of the JOURNAL appears a most timely symposium on the very important subject of summer diarrhea in infants. It would be well for our members to read this symposium, which will afford a very instructive review of this intensely interesting condition, to freshen their minds at this season when the disturbance is most frequently seen.

In the discussion will be found the following statement: "The term 'summer diarrhea' is bad because many cases occur out of season. Neither are all cases which occur in summer true dysentery. In fact most of them are not. Hence the term may not be employed synonymously. Would it not be better to call all of these conditions acute alimentary disturbances, and distinguish those due to bacteria?" This point is well taken. Custom and usage are peculiar things, which seem inherent within us, and require time to displace. No doubt it will be some time before the term "summer diarrhea" in infants will cease to be used. It is of value for the general practitioner to bear in mind that acute alimentary disturbances in children may occur any time during the year, and that differentiation must be made between those due to food and those due to bacteria. It must be remembered

that food intolerance is favored by heat; hence the acute alimentary disturbances are seen most frequently during the summer months.

In the feeding of infants, the question is raised of using milk from one cow. We should like to make a special reference in this regard. Where milk is obtained from one cow, and such is usually done where only one cow is owned and turned out to graze in the front or back yard, do not forget that these cows are very rarely if ever inspected, and the danger of undetected tuberculosis raises a grave issue in the use of milk from these cows. Another important objection to using the milk from only one cow is that, whether the milk be too poor or too rich, which is a condition that varies from time to time, nothing can be done to make it more suitable for the baby, this information not being known to the owner or parent; whereas, if the milk be from a number of cows, some giving rich milk and some poor milk, some quite healthy and others not so, the admixture will result in a uniform balance and grade, which is of decided advantage. This fact is also important because it is well known that cows' milk is poorer, at least in vitamin content if not in quality, during the winter months when the cows are stall-fed than during the summer months when they are pasture-fed.

PHYSICIANS' DELINQUENT ACCOUNTS

Observations on the best way to handle them; views of a number of practitioners

How to handle delinquent book accounts, in a manner that will induce settlement in most cases and not cause offense, is a problem with which almost every physician has to deal at least once a year.

With some professional men the question is very quickly settled. If one or two statements are sent without results, they simply charge off all old claims and forget about them, preferring not to enforce payment.

This plan may prove satisfactory to the physician who is well along financially, yet it is open to question whether it is the wise thing to do. Many people take advantage of such a situation and cease to regard a bill for professional services as one that need be taken seriously. Again, it is rather hard on the younger practitioner who is obliged to collect his bills to live, and fears the loss of his patients to older men who never press a patient for payment.

This aspect of the case is deserving of consideration, first, because the principle is economically unsound, and second, because it encourages indulgence in a dishonest practice. When people seek the advice of a physician they are incurring quite as much of an obligation as when purchasing merchandise in a store, and it is only rightful practice for physicians to realize this and adhere to the policy of requiring payment.

In these days of movies, automobiles, and the many requirements of social life, it is much easier to spend a liberal share of the family income on amusements and luxuries than to pay the doctor's bill. The custom of making him wait six months or a year is already too prevalent, to say nothing of charging off accounts which, in most cases, could be paid if more forceful demands were made for settlement.

A physician is more or less familiar with the financial resources of his patients. If he has knowledge that the family is in destitute circumstances, it is a foregone conclusion that it is useless to press for payment; but where he knows that the family is in average circumstances and in a position to pay their bills, there is no need whatever for cancelling his claim. As a matter of fact, most cases of this kind come under the head of mistaken kindness.

To see families occupying expensive seats at theatres and riding around in costly automobiles when they owe their physicians bills of long standing, is not a pleasant reflection for the latter, yet it is a common sight to the average practitioner.

Every physician in the land is required to do more or less charitable work in the course of a year, and they do it cheerfully. Surgeons are daily performing operations without pay, both in hospital service and in their private practices. Such service, however, is given with the full knowledge of its character and is not to be confused with that furnished to office patients who seek medical advice in good faith and who should be willing to adhere to that faith and pay their bills.

Credit men in the large mercantile houses are unanimous in their belief that if payment on overdue accounts is not enforced, the debtor will, in most cases, take his trade elsewhere and pay cash for what he needs; whereas, if insistent demands are made for payment, he will continue to buy at the same store, and make small payments on the old account until it is settled.

A physician of considerable experience said recently that some years ago when he had worked into a rather large practice he was kept going day and night until he had worn himself out, yet he could collect only about 50 per cent of his accounts. Realizing that he could not continue the pace, he turned over all of his old claims to a long-established collection agency. This plan, he found, worked to his advantage in

three ways. His receipts increased materially, his hours of work were reduced, and he had considerably more time to himself.

From suggestions advanced by a number of physicians, it seems to be the consensus of opinion that the best plan for the average practitioner to follow is to divide his "delinquents" into two classes: those who have not the means to pay, and the others who can and will pay if pressed. Those in the former class may as well be charged off, because payment is well-nigh impossible. The collectible accounts can then be turned over to one of the old, established agencies for attention.

Great care should be taken in the selection of an agency for the reason that in recent years many unscrupulous individuals have engaged in this line of work. The business as conducted by them requires little or no capital. All they need do is to engage desk room in a large office building and advertise a new method of collecting delinquent accounts. When they have gathered in several thousand dollars they suddenly depart, without remitting any of the money collected, and after a time set up shop in some other city under another name. Sharpers of this type seldom use the recognized methods of collection, having usually some brand new idea which is guaranteed to work wonders in a short time.

It is not difficult, however, to keep out of the clutches of these schemers. If a physician will investigate the agency or individual with whom he is considering the placing of his collection business, he will find he can "get a line" on the firm very quickly. One of his medical societies will often make inquiry, or he can write to the publishers of any magazine through which he learned of the agency. A good plan to follow in all cases is not to send claims to a new and unknown company, but rather to use an agency with a record of years behind it and an established reputation.

SOME NEUROTIC DISORDERS IN EARLY LIFE

An article by Griffith, bearing the above title, appeared in the *Medical Journal and Record* for February 2, 1927, as part of a symposium on pediatrics, and it is unfortunate that much of what the author said cannot be read by the laity as well as by physicians, particularly that part of the article dealing with some of the causes of simple nervousness in babies and children. Particular stress is laid on the harmfulness of the long school hours now demanded of children, and especial attention is called to the dangers of encouraging, or even permitting, school children to take up any kind of study outside of school hours—two points on which too much emphasis cannot be laid, and the correction of which should be much more realized and far more actively objected to by pediatrists and those brought in daily contact with children, whether they be normal or abnormal, sick or well.

The subject of too much active play is also dealt with in a very practical way, and attention is called to the necessity of individualization in the prescribing of play for the children. This leads one to suggest, although the author does not do so, the dangers of mass play, as well as mass work, at summer camps for children, and one cannot help but feel that the tremendous increase in heart disease in children may, to some extent at least, be due to this failure to individualize both work and play for children.

Reference is made to some of the peculiarities of the psychasthenic child, as a result of which he is sometimes almost looked upon, as the author states, as being crazy, when, as a matter of fact, the child should rather be pitied than blamed, and, to some extent, indulged rather than punished. The subject of hysteria in children is dealt with at considerable length, and all who have an opportunity, especially pediatrists, should read this article, and particularly this part of it, in full. The quoting of a number of cases illustrating the different forms of nervous disorders in children adds materially to the value of the papers, and any one reading them would receive much valuable information and aid in differential diagnosis of the various conditions. As the general practitioner is the one, in the majority of instances, who sees these patients first, this article would also be of value to him.

MENTAL HYGIENE IN THE PUBLIC SCHOOLS

S. P. Davies in the *Mental Hygiene Bulletin* for December, 1926, calls attention to the need of instruction in mental health in the public schools. No doubt his long years of interest in social problems plus his observation of the practical application of instruction in mental hygiene given the students in the colleges and universities of Pennsylvania have led him to establish such a worthy goal of attainment in the school system of New York.

If the knowledge of the principles of mental hygiene has been found helpful to deans, faculties, student groups, and the individual students of our colleges and universities, why should

we longer deprive the principals, teachers, and students of our high schools of its priceless value? The writer believes the effort worth while, and wishes good luck to Davies.

CO-ORDINATING EDITORIAL POLICY AND ADVERTISING

There are few of the daily and weekly newspapers which do not delight to run editorials and feature articles giving the best of health advice; yet in many of those very papers are carried large quantities of "patent-medicine" and quack-remedy advertising. In some papers called to our attention recently this has amounted to as much as several pages in one issue.

Ordinarily, it is the small-town newspaper which yields to the siren call of these advertising experts, and we can readily understand the temptation it is to a paper whose advertising is necessarily limited by the nature of its clientele.

We do believe, however, that in spite of the financial sacrifice involved in refusing this class of advertising, most of the better-disposed publishers would yield to proper representations on the part of the organized medical profession, and would clean up their pages and make their advertisements conform to their editorial policy. Their responsibility for the health of the people is too great to permit this glaring inconsistency to continue for the sake of profit.

We commend the subject to the consideration of the various county societies.

FATHER'S DUTY TO BE "PAL" TO SON

The practitioner of medicine is in a peculiar position to observe the number of instances that the father is not the pal he should be to his son. This may be due to the ultra dignity of the father, to indifference, to absorption in sordid gain, or to various other reasons. Yet it is a duty every father owes his son to be his boon companion, so that no matter what the boy's problem is, on any and all occasions he may feel that he can approach his father with ease, and always he will be received with real paternal comradeship. The physician frequently can correct this error, if he senses the situation, by giving both the father and son wholesome advice.

It would seem that the dangerous age for the boy is the high-school age. This is the time he should be advised in regard to venereal diseases by his father, or better still, taken by the father to the attending physician. The present high-school age is moving at a pretty fast rate, and the boy should be reined in to what should be his normal speed. The number of suicides lately among boys of this age is worthy of note.

Supreme Court Justice Richard H. Martin, of New York, recently stressed the importance of the secondary school. "Those who have been devoting their time to advancing the colleges," he said, "have been working at the wrong end. The age that a boy should be watched carefully and taught carefully, should be surrounded by the best influences, is the high-school age, and the high-school age has been neglected."

JOTS AND TITTLES

Scientific Research

Satisfactory results from a new treatment for pernicious anemia have been announced by Dr. Karl Koessler, of the University of Chicago, following two years of experiments. The experiments, which are being continued at the Sprague Institute, at the University, tended to show that the fat-soluble vitamins in the diet provided at least one factor in the regeneration of the blood. Under Dr. Koessler's treatment none of thirty patients placed on his diet has had a relapse.

The discovery of a new anesthetic, called "107" which, it is declared, will supersede the use of chloroform and ether, was reported before a recent meeting of the Berlin Medical Society by Dr. Ernst Unruh, director of the Rudolph Virchow Hospital in Berlin. More than 300 tests with the new drug have proved successful, the patients treated falling into a deep sleep, while the heart, pulse action, and blood pressure remain normal. The new preparation is a bromid which is introduced into the intestines through an enema in the form of a solution that produces complete anesthesia in a very short time.

At the recent meeting of the American Medical Association in Washington, the successful use of two new medicines was reported. Dr. Frederick M. Allen, Morristown, N. J., said an extract known as myrtillin, made from the blueberry leaf, has been found useful in aiding assimilation of starchy foods, but added that "exaggerated expectations should be discouraged." Dr. W. H. Howell, of Baltimore, Md., reported that an anti-coagulant known as heparin had been "used with excellent results" in blood transfusions. It is prepared from the liver of dogs.

The announcement made by Prof. Lazare Carnot, French biologist, that growth-producing germs taken from embryos of animals can be administered to human beings to promote rapid growth, has been confirmed in Berlin by noted biologists who have repeated Carnot's experiments. It is predicted that in the future such substances will be used in the treatment of backward children or in other cases where it is necessary to stimulate growth. Biologists see unlimited possibilities in the treatment, but are uncertain of the efficiency of the substances in their application to adults.

Prof. Fritz Paneth, of Berlin University, has retracted his claim of being able to produce synthetic helium from palladium asbestos. Closer investigations have revealed to Prof. Paneth and his colleagues that the so-called "alchemical helium" existed in asbestos and was merely liberated by the new process.

A Course in Medical Bibliology

The Medical College of the Long Island College Hospital, Brooklyn, has inaugurated a course in "Medical Literature and Bibliography." In a number of schools the importance of bibliographical knowledge has been stressed by individual teachers, but so far as is known, this is the first established course of this nature included in the curriculum of any medical school in the country. An attempt is being made to show the student the real value of literature which constitutes such an important part of the background of his work; and to teach him how to use a library.

Court Defines "Doctor"

Osteopaths and chiropractors may not use the word "doctor" as an occupational designation relating to the treatment of human ailments in Ontario, Canada, according to a recent ruling by Judge Middleton. The use of the word by those who are not registered surgeons or physicians under the Ontario Medical Act is held to be illegal.

Doctors Cut Own Pay

Italy's doctors are joining butchers, bakers, and other tradesmen in accepting reductions of remuneration on the strength of the Government campaign to reduce the cost of living. The physicians of Genoa have taken the initiative by making a 5 per-cent reduction in their rates.

New Plan For Reducing Nursing Cost

In an address at the opening session of the sixth annual conference of the Hospital Association of Pennsylvania, held in Philadelphia recently, Howard E. Bishop, superintendent of the Robert Packer Hospital, Sayre commended a new plan for reducing the cost to the patient of adequate nursing care while in a hospital. This plan was developed at St. Mary's Mercy Hospital, Gary, Ind., and provides that all special nurses on the registry agree to take two weeks of night-group nursing yearly. As hospital construction now costs double what it did fifteen years ago, Mr. Bishop said that the tendency of the times is toward smaller wards or toward rooms not containing more than two patients.

Courses in Teacher-Training for Sight-Saving Classes

According to an announcement by Lewis H. Carris, Managing Director of the National Committee for the Prevention of Blindness, a number of universities this year will offer during the summer session courses for the training of teachers for sight-saving classes. Courses will be given at the University of Cincinnati, at the George Peabody College for Teachers in Nashville, Tenn., and at the University of Southern California at Los Angeles.

National Hospital Day

One of the features of celebrating National Hospital Day is to bring out the advantages of the maternity service of the respective institution.

The *Philadelphia Record* had this editorial comment to make on the recent National Hospital Day celebration in certain hospitals. "Invitations were issued to all the mothers who found their babies under cabbage leaves raised by that particular institution to return for a visit. Needless to say, the proud offspring is to come along and to form a major part of the exhibits for the day. The baby is, of course, adopting a sane, healthful, sanitary, and comfortable birthplace in choosing a hospital, and he is also insuring his mother good care and faithful attendance. But the historical aspects of the custom are deplorable. In a few more years we won't have any additional shrines to visit, where this and that eminent personage first saw the light of day, which was probably night anyway. Perhaps we will have to begin placing tablets in certain hospitals to mark the birthplaces of our future big-wigs."

Skyscrapers and Increased Life

Skyscrapers have been referred to as economical, beautiful, etc., but Mr. L. O. Honig, Chairman of the Height Limitation Committee of the National Association of Building Owners, prefers to praise their health-giving qualities. He states that the average length of life has increased more than ten years since the coming of skyscrapers. It is his opinion that the occupants of the tall buildings are not aware of this fact. The *New York Times* asks the pertinent question, "If the skyscrapers are to get the credit for added years, where does the decrease in infant mortality come in? Children are notoriously frowned upon in many big apartment houses, and the skyscrapers know them not."

Insurance Company Visiting-Nurse Service

New ideas are constantly being tried in the field of public-health nursing. The educational program which the Metropolitan Life Insurance Company has adopted in connection with its extensive visiting-nurse service has shown wonderful results. In no way intended to supplant or supersede the regularly constituted courses in public-health nursing, the plan was put in operation largely for the purpose of arousing greater interest along those lines, and it already has had a stimulating effect. The plan is to be a fixture in the company's general system of training its independent staff nurses for the highly specialized work they are doing in the homes of American wage earners. While it has always been the company's policy to conduct its welfare work when possible through nursing associations, a large number of localities have none, and it devolved upon the Metropolitan to obtain nurses of its own and instruct them in their duties. At present there are nearly 600 of these independent staff nurses, as distinct from those employed by more than 950 nursing associations affiliated with the company. Teaching institutes, held twice a year in various sections of the United States, are not limited to Metropolitan staff nurses, for invitations are sent to such organizations as the Red Cross, State Departments of Health, and Visiting-Nurse Associations, to have representatives attend. The welfare work of the Metropolitan has reached such tremendous proportions that its nursing service has become an important factor in contemporary public-health work. More than 4,300 cities and towns of the United States and Canada are covered by 1,438 nursing centers.

Human Height Increasing

The girls and boys of today are one to two inches taller, on an average, than those of twenty-five years ago, medical records of various social-service organizations show. "This is clearly demonstrated by seeing how the young girls tower above their mothers, and particularly above their grandmothers; boys above their fathers," says Edwin D. Solenberger, general secretary of the Children's Aid Society, Philadelphia. The real reason is undoubtedly the improvement in diet for children, systematic exercise, outdoor sports, and fresh air. Another important factor is that the growth-

retarding tonsils and adenoids are more generally being removed. The teeth also are being given better attention.

Medical Wireless Code

British physicians are urging an international medical radio code, so that medical instructions may be transmitted to doctorless ships of any nationality, thus obviating the difficulty of differences in language. This move is deserving of coöperation.

MEDICOLEGAL AND LEGISLATIVE NEWS

Enforceability of Gifts to Hospitals

In an action to recover a donation promised by deceased to build an addition to a hospital, the question was whether the deceased's oral promise or agreement to give the hospital a specified sum was enforceable against his estate after his death by reason of a lack of consideration to support it during his lifetime.

The Maine Supreme Judicial Court, Central Maine General Hospital v. Carter, 132 Att. 417, says that where the deceased had offered the hospital a donation to build a wing, which offer the corporation considered and intended to accept, and conferred with architects and obtained preliminary sketches with the offerer's knowledge, it was held that there was an implied promise to devote the gift to the purpose specified, which was a good consideration.—*Medical Journal and Record.*

Failure to Record License Not a Violation of the Criminal Statute Against Practicing Without License

In proceedings for "practicing as a physician without first being examined and obtaining a license so to do as required by law" under Hemingway's Mississippi Code, §1068, it appeared that defendant had been practicing as a physician in Clarke County, to which he had moved from Wayne County, and had not recorded a license to practice in Clarke County within sixty days from the time of his arrival, as required by section 6372 of the Code. The defense was that the defendant had obtained a license which had been recorded in another county, but the license was lost at the time of the trial. The Mississippi Supreme Court held, Grady v. State, 109 So. 728, that an instruction which practically told the jury that it should convict the defendant of the crime charged in the indictment if he failed to record his license in Clarke County, regardless of whether he had first obtained a license to practice before he practiced there was an error, although section 6372 provides that the penalty for failure to record is that the license shall become void. Failure to record would not constitute a violation of the criminal statute, section 1068.—*Medical Journal and Record.*

Refusal to Submit to Operation Held Not Unreasonable

Whether or not the action of an employee in refusing to submit to a surgical operation or in failing to follow competent medical advice is reasonable is almost universally held to be a question of fact to be determined by a careful inquiry of the circumstances. The applicant for compensation for a fracture of the leg at the head of the tibia and very close to the knee joint was a man whose lungs were in an inflamed condition, which would be aggravated by an anesthetic with probable resulting pneumonia. The doctors could not agree on the kind of binders to be used on the bones, but they agreed that there was danger of infection with consequent permanent stiffening of the knee joint, and there was no assurance of the success of the operation. The Kentucky Court of Appeals held, Wallim Creek Collieries Co. v. Hicks, 287 S. W. 713, that the evidence sustained the finding of the Compensation Board that the employee's refusal to submit to an operation was not unreasonable.—*Medical Journal and Record.*

Chiropractor Requires Certificate Under Alabama Statute

The Alabama Supreme Court, Donovan v. State, 109 So. 290, holds that treatment designed to remove the "cause of disease," followed as a profession for pay, is a treatment of disease within the meaning of the Alabama statutes; and chiropractic is expressly named as one of the methods of treatment of disease for which examination and certificate of qualification is required. Ala. Code 1923, §2837.—*Medical Journal and Record.*

PUBLIC HEALTH

Do We Really Live Longer?—No, says Edwin G. Dexter, writing in the *Independent* (New York), if "we" means the citizens of later middle age. Our average life span is greater, but that is because the babies and young children live longer. Mr. Dexter believes that the average age of the old people at death has not varied much through the centuries, and that it was even slightly better among the ancient Greeks than it is now. The fact that the weaklings died early in Greece may have had something to do with that. He started his investigations after hearing the statement that nineteen years had been added to the span of human life since 1855. From the necrology published in the yearbook of one of the great New York City dailies, he eliminated women because frequently the age was not given, also all violent deaths. Exclusive of these, 550 deaths were recorded, the average age at death being 69.20 years. From a file of the same yearbooks dating back to 1873 the following data were secured:

Date	*Average Age*
1925	69.20
1915	70.33
1905	68.75
1895	70.90
1885	66.37
1875	66.01

From the *Cyclopedia of Classified Dates* he gleaned the following:

Date	*Average Age*
19th century	63.25
18th century	69.7
17th century	63.7
16th century	60.31
15th century	66.1
14th to 1st centuries	59.22
Romans before Christ	65.18
Greeks before Christ	70.61

These figures are not the average age of the whole population for the years tabulated, but are the average age of those who achieved such a place in their communities as to be mentioned in a yearbook, and to that extent they are comparable. Has, therefore, the average age of those living to middle life been increased?

Public-Health Nurses to Fight Blindness.—Enlistment of the 12,000 or more public-health nurses of the United States in the campaign for the eradication of the preventable causes of blindness has been announced by the National Committee for the Prevention of Blindness. As an initial step toward the utilization of these workers, the Committee has sent Mrs. Jessie Ross Royer, head of its nursing division, on a trip through Missouri, Kansas, Kentucky, and western New York, during which she will give fourteen demonstrations before nurses' organizations of a newly developed technic for examining the eyes of children under school age. This method was demonstrated publicly at a recent joint conference of the National Organization for Public Health Nursing and the National Committee for the Prevention of Blindness, in New York City. The demonstration so impressed public-health officials and oculists who witnessed it that similar demonstrations have been arranged for Buffalo, New York, St. Louis, Kansas City, Jefferson City, Missouri, and Lexington and Louisville, Ky.

This technic involves the use of what is known as the illiterate E chart in such a way that the letter E becomes "a funny little three-legged animal" and the business of reading the chart becomes a game in which the child shows which way the three-legged animal's legs point. This method has made it possible to measure with a fair degree of scientific accuracy the vision of children not only in the kindergarten stage, but as young as three years.

In the country's first preschool eye clinic, conducted by the National Committee in New York, it was found that approximately 25 per cent of the children examined, all of whom were under seven years of age, had some eye ailment. It should not be assumed from this, however, that 25 per cent of all preschool children have eye difficulties.

Menace of Slightly Positive Wassermann Reaction. James Herbert Mitchell (*J. A. M. A.*, 1926, lxxxvii: 1351) without wishing to minimize the great value of the Wassermann test, calls attention to some of the unfortunate results of an unwarranted diagnosis of syphilis based only on one slightly positive Wassermann reaction. In case of a doubtful report, further specimens should be examined before the patient is informed of the result. This is particularly important in view of the fact that syphilophobia is increasing at an alarming rate in this country. Wile, Corper, Duncan, and Moore took part in the discussion, all agreeing that the single positive Wassermann reaction should be supported by other evidence before the diagnosis of syphilis is made. Wile declares that "today the majority of syphilitic cases are not being treated for syphilis but for a positive Wassermann reaction."

Origin of Wassermann substance in the blood serum.—Positive response to the Wassermann test has been seen in frambesia, recurrent fever, leprosy, malaria, scarlet fever, tropical ulcer, petecchial fever, acute lupus erythematosus, soft chancre, pregnancy, and puerperal and retroplacental blood, under anesthesia, in the blood of dead bodies and of many domestic animals. In a slight degree it is seen in cachexia of tumors, tuberculosis, diabetes, lead poisoning, etc. The cerebrospinal fluid responds positively not only in syphilis but sometimes also in tuberculous meningitis, cerebral tumor, multiple sclerosis, encephalitis, and petecchial fever. The serum in syphilis is characterized by its behavior toward lipoids. It shows flocculation and is labile as to its albumin content. These characteristics are quantitative and not qualitative. Forsmann has shown that treating rabbits with alcoholic horse-organ extracts caused formation of antibodies, which was shown by a positive Wassermann reaction and flocculation. Immunization of rabbits could not be effected with alcoholic extracts of these organs, but by the dry residuum which produced antibodies.—L. PHILIPPSON, *Riv. pat. sperimen.*, Naples, 1926, I, 233.

State Health Department News

THE SECRETARY OF HEALTH recently announced that a Section of Industrial Waste has been created in the Bureau of Engineering exclusively for the work of the Sanitary Water Board. Upon it will devolve the duty of making sanitary-engineering surveys of designated streams for determining proper classification as well as the degree of treatment of polluting substances. It will also make field inspections of cases of industrial waste and report on methods for its treatment and disposal. The Chemical Laboratory is at present engaged in a preliminary research upon pulp and paper-mill wastes. This work is in advance of the research work soon to be undertaken in the laboratories of eight Pennsylvania mills. Through this method a uniform laboratory practice will be developed. F. E. Daniels has been designated as chief of the Section. He will continue to maintain his present control and supervision of the Chemical Laboratory of the Sanitary Water Board. Other members of the new section are Dr. Glen B. Brown, Paul Rogers, and Mrs. Frances Kennedy.

THE SANITARY SURVEY WORK is now in full swing. Thousands of properties have been inspected within the last month and the follow-up connected therewith has already been accomplished. These activities emphasize the physical condition of properties with a view to eliminating nuisances—in other words, a scientific clean-up.

MARKED SUCCESS HAS ATTENDED the work of the Tuberculosis Extension Clinics. The motorized unit, in addition to Pike, Wayne, Susquehanna, and Snyder Counties, will invade Huntingdon, Blair, and Lycoming Counties. Deputy Secretary of Health Dr. William G. Turnbull, who supervises this work, states that the physicians in these localities are coöperating splendidly, and in the majority of the cases are bringing the patients to the laboratory car for examination. All patients are referred back to the family physician for treatment. School children who are fifteen per cent or more underweight are discovered by the State nurses and forwarded for examination. The majority of these children are institutional cases and are being rapidly sent for treatment either to Mont Alto or Cresson. The conservation in child and adult life in thus fighting tuberculosis on its own ground is a real service, particularly to the rural districts.

THE DEPARTMENT IS NOW ACTIVE in protecting the health of the thousands of automobile tourists who are availing themselves of the many automobile camps in this State. In this connection, the Secretary of Health said, "A survey by State Health Officers, which will be more or less continuous during the summer months, will assist in the enforcement of the sanitary regulations. But, if tourist camps in Pennsylvania are to attain that degree of sanitation and safety required by law, the traveling public must materially assist in bringing it about. Motorists are advised when camping out to make sure that the camp, whether large or small, has complied with the law and that the water supply has been marked fit to

drink by the Department of Health." Dr. Appel also advised vaccination against typhoid fever, whether local automobile excursions or more extensive ones are contemplated. He said, "It is a weapon which science offers you. Its effectiveness is undisputed. Antityphoid-fever vaccine will be administered by your physician. It is an armor which you may need. Put it on. Now is the time." Are you protected?

THE PENNSYLVANIA STATE SANATORIUM AT MONT ALTO has installed an amplification system in the auditorium which brings radio programs, as well as entertainments given in the auditorium, to bed patients in the infirmary. There are now 200 pupils enrolled in the school at the children's hospital there. Twenty-nine older patients are enrolled in the typewriting and shorthand school.

THE BUREAU OF COMMUNICABLE DISEASES recently ordered seven full-time health officers to the Medical Field Service School at Carlisle to undergo a four-weeks' course of instruction in communicable disease control and rural sanitation.

ON APRIL 11TH a meeting was held in Bridgeport, Montgomery County, with representatives of every municipality between Chester and Philadelphia as well as officials of the Pennsylvania State Health Department's Engineering Bureau. The conference was held for the purpose of discussing means and methods of eliminating stream pollution in the Schuylkill River above the Philadelphia intake. Mr. W. L. Stevenson, Secretary of the Sanitary Water Board; Mr. H. M. Freeburn, District Engineer, of Philadelphia and Mr. F. E. Daniels represented the Sanitary Water Board and the Health Department.

HOSPITAL ACTIVITIES

What Is a Charitable Institution?—From time to time we receive communications from various parts of the country inquiring as to the legal definition of a charitable institution and, for the information of hospitals in general, we wish to refer to a classic definition of Horace Gray, then a Justice of the Massachusetts Supreme Court, and later a member of the United States Supreme Court. Justice Gray said in the course of an opinion in which he reviewed all former decisions:

"A charity, in the legal sense, may be more fully defined as a gift, to be applied consistently with existing laws, for the benefit of an indefinite number of persons, either by bringing their minds or hearts under the influence of education or religion; by relieving their bodies from disease, suffering or restraint; by assisting them to establish themselves in life; or by erecting or maintaining public buildings or works, or otherwise lessening their burden of government." (1867, Jackson v. Phillips, 96 Mass. (14 Allen) 539, 556.)

A point that has aroused a question in the minds of some legal jurisdictions is whether or not the charging of fees to private patients affects adversely the legal status of a charitable hospital, and in this connection the following decisions selected from Lapp and Ketacham on Hospital Law are offered:

"That fees are charged by a university or hospital is not controlling as to its being a charity, for only when such income is devoted to the profit of the founders and not used to carry on the work by adding to the endowment, etc., does it show the institution is a business and not a charity." (1916 Butterworth vs. Keeler, 219 N. Y. 444, 114 N. E. 803 offg. Judgment, 154 N. Y. S 744, 169, App. Div. 136.)

"What controls is not the receipt of income but its purpose. Income added to the endowment helps to make it possible for the work to go on. It is only when income may be applied to the profit of the founders that business has a beginning and charity an end. The line of division is the same whether the gift is devoted to education or to the relief of the poor, the halt and the blind."

"When the bequest is to an association whose beneficence is restricted to its members only, it is not a public charity." (Bobb vs. Reed, 5 Rawle (Penna.) 151, 28 Am. Dec. 650). "But, if extended to nonmembers, may be counted as public charity." (1848, Pickering vs. Shotwell, 10 Pa. 23).—*Bulletin of the American Hospital Association*, April, 1927.

What are the Special Needs of the Modern Maternity?—Dr. Joseph B. De Lee discusses this very timely subject as follows: Two fundamental principles underlie the planning and construction of a modern hospital for the care of women during childbirth: first, the maternity must be a separate, detached building, a hospital complete in itself; second, everything in it and about it must be the equal if not the superior of everything in and about the surgical hospital. It is dangerous both to mothers and babies to make the maternity ward an integral part of a general hospital. The surgical and medical patients are a distinct menace to the obstetric patient, and therefore, part of the present mortality and a relatively larger part of the present morbidity, both maternal and fetal, are due to the practice of treating such cases in close proximity.

The dangers come from contagion. The infection is transported from the surgical and medical cases to the lying-in woman and the neonatus, first, by carriers (the nurses, the interns, the attending men, the scrubwomen, and others); second, by the air, in swirling air currents laden with dust or dried pulverized pus; third, through the laundry, through defective sterilizers, both instrumental and human. As a result of our inability to counteract these agencies, our old enemy, epidemic puerperal fever, is reappearing in our hospitals, and reports of this are coming in from east and west, north and south. It appears to be conclusively demonstrated that it is not possible, even with rubber gloves, high-pressure sterilizers, individualization of cases, and good aseptic technic (that is, so-called administrative isolation) to shut infection out of the maternity ward.

The first principle, therefore, to be carried out in planning a maternity ward is to provide an entirely detached building for it, complete with its own kitchen, laundry, servants' and nurses' quarters. This means there must be architectural isolation, and in addition to this, complete separation of the clean from the infected patients. The maternity, besides being removed from the dangers emanating from the medical and surgical wards, must be provided with a place to isolate women and babies who develop infection in its wards, as well as those cases of puerperal infection that are brought in from the outside.

The second great principle in maternity construction is that everything connected with this branch of service must equal and in some respects surpass that provided for the surgical service. Far-reaching indeed is this requirement, and it is one that most boards of trustees of hospitals cannot see. They are still obsessed with the ancient prejudice that childbearing is a normal function, that any old woman is competent to superintend it, and that any kind of makeshift preparation is good enough for such a performance.

A maternity is more expensive to build and to maintain than a surgical unit, it being understood, of course, that both are of the same quality. A surgical operating unit closes down almost entirely at night, an obstetric unit is on twenty-four-hour service, and requires three shifts of supervisors and interns. A surgical operation lasts from 5 to 120 minutes, rarely three or four hours; an obstetric case lasts from a few hours to several days. An operation is completed in one sitting; there may be two to six sittings on an obstetric case. The surgical patient is sewed up and sent to bed with an occlusive dressing which is not disturbed for a week or

two, and the patient usually goes home with the second dressing applied; the obstetric patient goes to her room with a nonocclusive pad (costing as much as an occlusive dressing), and this is renewed every four to six hours for one or two weeks (in the Chicago Lying-In Hospital, 400,000 pads were consumed last year). Two surgical operating rooms can take care of the operations of a large hospital; the maternity needs numerous operating (delivery) rooms, labor or first-stage rooms, ward service in the operating suite, and more rest and scrub rooms for the attending staff. The maternity operating-room floor must be built to accommodate frequent peak loads, as obstetric work is notoriously irregular. The maternity, while necessitating the same ward service, sterilizing rooms, and duty rooms on the bed-patients' floors, requires, in addition, two kinds of nurseries for the babies, with all their numerous appurtenances. The nursing service of the maternity is easily 75 per cent greater than that needed in the surgical wards, the food consumption is more than 30 per cent greater, and the laundry work is fully twice as large. The equipment of a birth room is the same as that of a surgical operating room. The receiving crib for the baby, of course, must not be forgotten. This may be heated by a few electric lights, and should always have a cabinet for the nitrate-of-silver solution for the baby's eyes, and materials for its first oiling.

Some hospitals still use the hot and cold bath for resuscitating asphyxiated babies. We hold this method cruel, shocking, unnecessary, and dangerous. The item of expense of installation and upkeep would cause artificial ventilation to be rejected by most institutions unless it could be proved distinctly beneficial. Much can be done by the administration—the doctors, interns, and especially the nurses—to minimize the evil of noise. They forget about such refinements of practice in the interest of their work.

The article contains advice in regard to the construction and other matters of detail pertaining to a maternity hospital.—*Modern Hospital.*

INDUSTRIAL MEDICINE

Moisture as an Etiologic Factor in Industrial Infections.—C. W. Groff, of Cheury Bros., gives his experience with infected wounds in silk workers. In group one handling dry raw materials, of six workers, two (or 33 per cent) suffered infections following lacerations sustained during work. In group two handling moist silk, not actually wet, the 44 operators had sixty hand injuries, with 31 infections. In group three with the hands continually wet or damp, 51 operators had 151 hand or forearm injuries, with 117 infections resulting. These groups were all handling the same materials, with moisture the only variable factor.

Benzol Poisoning.—A study of benzol poisoning reported by the National Safety Council is summarized by C. E. A. Winslow in the *Journal of Industrial Hygiene* for February, 1927, as follows: Field studies have indicated that the use of benzol as an industrial solvent is attended with health hazards which can be avoided only by the provision of elaborate local exhaust ventilation and by the maintenance of a comprehensive system of medical supervision.

Laboratory investigations make it clear that certain of the higher homologues of benzene, such as toluol, xylol, and Hiflash naptha, are relatively free from the special hazards which attend the use of benzene itself. These substances, in large doses, are even more powerful narcotics than benzol, but their low volatility and marked odors make it highly unlikely that they will occur in workroom air in sufficient concentration to produce effects of this sort. On the other hand, they are almost wholly lacking in those specific destructive effects on the nerve tissues and, above all, on the blood-forming organs so characteristic of benzol. Under ordinary conditions of use, and in any concentrations in which they would be likely to occur in workroom air, these substances appear to be relatively harmless.

We would, therefore, urge that the serious attention of manufacturers now using benzol should be given to the possibility of substituting one of these substances, or other relatively harmless substances, wherever the conditions of a given manufacturing process make it possible to do so.

Alterations in the Teeth Resulting From the Occupation.—Confectioners present a characteristic form of tooth decay. It differs from the usual form by its localization, extension, soft condition, and by the brown or black color of the exposed tooth substance. It is caused by the sugar dust which is inhaled and settles at the necks of the teeth. The acid resulting from fermentation decalcifies the teeth, permitting lodgment for the bacteria which completely destroy the tooth substance.

The characteristic discoloration of the teeth of metal workers is occasioned by the inhalation of metal dust, which settles on the teeth, becomes oxidized by the fluids of the mouth, and spreads its discoloration from the gingival margin to the middle of the tooth surface. The color varies, being green, brown, or gray, according to the teeth.

The dust inhaled by brickmakers causes the crowns of the teeth to be ground away.

Workers in chemical industries are subject to necrosis of the front teeth from the acid vapors in the air. The first symptoms are usually discomfort in the centrals, which becomes sensitive to changes of temperature and react painfully to sour, sweet, or salty foods.

The incisors, upper and lower, are frequently worn away on the cutting edge, sometimes in tiny grooves, by persons employing them excessively: cigar makers, who bite off the end of the cigar wrapper; clarinetists; teachers and clerks, from the habit of holding a pencil between the teeth; needle-workers, from biting the thread; cobblers and upholsterers, from nails held in the mouth and passed to the teeth; glass blowers, from holding and turning the blowpipe. It is remarkable that these worn edges of the teeth are always free from caries.—M. KRAUS, *Zentralbl. f. Gewerbehyg.*, May, 1926, N. S., vol. 3, pp. 127-130. Abstracted in *Journal of Industrial Hygiene*, February, 1927.

Women in Lead Work.—There is no doubt that the older statistics on lead poisoning in women are largely fallacious because women were given the most dangerous jobs in the industry and were badly paid and underfed. The International Labour Office states that "while English opinion inclines to the view that women are more susceptible to the action of lead than men, this is not accepted by German writers, who consider that their poor state of nutrition, poverty, industrial fatigue, added to housework, long hair, and a type of clothing favoring the accumulation of a greater quantity of poison upon them, are sufficiently potent factors to account for the apparent disparity. Data from the United States are not sufficient to allow the experts to support either of these views. All, however, agree that in women lead poisoning assumes a more severe form than in men."—Abstract from editorial in the *Lancet*, November 27, 1926.

THE MEDICAL SOCIETY

OF THE STATE OF PENNSYLVANIA

OFFICERS' DEPARTMENT

WALTER F. DONALDSON, M.D.

Secretary
8062 Jenkins Arcade Building
Pittsburgh, Pa.

BOARD OF TRUSTEES MEETING

The regular meeting of the Board of Trustees was held at the Harrisburg headquarters of the Society, May 10th, with all members of the Board in attendance.

Formal reports were received and discussed—from the Secretary of the Society and the Chairman of the Committee on Public Health Legislation, as well as from the following standing committees of the Board: Finance, Publication, Executive, and the Special Committee on Legislation.

The Secretary was instructed to request the 1927 Committee on Scientific Work to provide a place on the program of the opening general session for Dr. Charles H. Frazier, of Philadelphia, to discuss the proposed educational program planned to create state-wide interest in a bond issue of $50,000,000 to improve Pennsylvania's facilities for treating and preventing mental and moral delinquency.

A recommendation of the Finance Committee was approved investing approximately $5,000 in the General Fund for the Medical Benevolence Fund.

The Secretary was instructed to write to the proper officers of the American College of Surgeons and the American College of Physicians calling their attention to the fact that the Medical Society of the State of Pennsylvania convenes its sessions annually on the first Tuesday of October, and requesting due consideration of the interests of all concerned in order that conflict in time of meeting might not again occur.

The Secretary was instructed to write to Governor Fisher calling his attention to the existence of our Disaster Relief Committee, Dr. Theodore B. Appel, Chairman, and offering him the resources of our Society which might be adaptable for the relief of Mississippi Valley flood sufferers.

The Committee on Publication was instructed to renew former proposals to the Medical and Chirurgical Faculty of Maryland (Maryland State Medical Society) regarding their coöperation with our Society in the publication of the Atlantic Medical Journal.

The Secretary was instructed to write to the Honorable William C. Freeman, of Lebanon, 1927 Chairman of the Senate Committee on Health and Sanitation, expressing the appreciation of the Board of Trustees for his considerate service during the 1927 Session in behalf of the public interests of the Commonwealth.

The Secretary was instructed to secure properly inscribed gavels to be presented as a token of appreciation to Ex-Presidents and to President Harry W. Albertson at the Pittsburgh session of the Society.

1927 SESSION OF THE A. M. A.

Our Society was represented in the House of Delegates of the American Medical Association, which convened at Washington, D. C., on Monday, May 17th, by its complete group of duly elected delegates; namely, Charles C. Cracraft, J. Newton Hunsberger, William H. Mayer, John A. Campbell, Arthur E. Crow, John H. Murray, Orlando H. Petty, Walter F. Donaldson, J. Norman Henry, and Samuel P. Mengel. The members of our delegation served in the deliberations of the House and on its reference committees faithfully and in accordance with the best traditions of our Society. Dr. Mengel served on the Committee on Sections and Section Work; Dr. Henry, on the Committee on Reports of Officers; Dr. Hunsberger, on the Committee on Reports of the Board of Trustees; and Dr. Donaldson, on the Special Committee on Nurses' Training and Service.

The first official action of the House of Delegates was the unanimous adoption of the following as suggested by Fred C. Warnshuis, M.D., Speaker of the House:

Honorable Calvin Coolidge,

President of the United States:

The American Medical Association, representing 94,000 doctors of medicine, convened in annual session, extends cordial greetings to you. We affirm anew the fundamental principles and objects of our profession. We subscribe again our willingness to contribute our services for accredited humanitarian purposes. We pledge a continuance of persistent efforts to unfold the unknown laws of physiology and hygiene and to uncover the causative factors of disease.

We are ever ready to apply approved scientific principles and practices to enhance the health of our people that their vocational and social pursuits may be attended by a minimum of disease and physical incapacity.

In this spirit we convey to you, Mr. President, our greetings and felicitations.

The American Medical Association,
Olin West, Secretary.

The tenth annual discussion on the question of the limitation by law of the amount of whiskey which a physician may prescribe created some interest in the House of Delegates, and a much greater interest in the daily newspapers of the Capital and the country. The House of Delegates finally decided that a legislative body composed of laymen has no right to tell legally qualified physicians how much whiskey they may prescribe for a sick person and to begin a movement asking for a repeal of the provision above complained of in the Volstead Act. The House in its consideration of this subject was addressed by Dr. Mayer of the Pennsylvania delegation, who served as Chairman of a special committee of the Board of Trustees of the A. M. A. to coöperate with the Commissioner of Internal Revenue and the Secretary of the Treasury.

By unanimous vote the House supported the following recommendation embodied in the report of the Committee on Incapacitated Physicians:

The results of this investigation convince the committee that the need for a national home for incapacitated and indigent physicians is not sufficient to warrant the American Medical Association "establishing, managing, and sustaining a home," as contemplated by the resolutions creating our committee.

The report of this Committee referred especially to efforts directed toward the relief of incapacitated physicians long under way by the state medical societies of Massachusetts, Missouri, and Pennsylvania.

The dignity of the deliberations of the House suffered considerably this year from several expressions of personal opinion which were subjected to distorted emphasis in the headlines of the daily papers. As a result one of the leading subjects for discussion was the advisability of requiring the Speaker of the House and the President and the President-Elect of the Association to submit their opening addresses to the House to the proper reference committee of the House before delivering same at the opening session.

A gratifying report was received from Ex-President William A. Pusey, Chairman of the Disaster Relief Committee of the Association, regarding its activities in connection with the relief of flood sufferers in the Mississippi Valley.

William S. Thayer, Emeritus Professor of Medicine, Johns Hopkins University, Baltimore, was elected President-Elect, and Charles A. Elliot, Professor of Internal Medicine, Northwestern University, Chicago, first Vice-President. Edward B. Heckel, Pennsylvania, and Rock Sleyster, Wisconsin, were reëlected to the Board of Trustees to serve a full term of five years, Dr. Heckel at the organization meeting of the Board of Trustees being reëlected Chairman. The total number of members in attendance who registered was 6,273, of whom 897 were Pennsylvanians. The 1928 meeting of the Association will be held in Minneapolis.

The Scientific Exhibit and moving-picture program surpassed all previous attempts. The consistently large attendance this year upon these features as well as upon the sessions of the fifteen scientific sections expressed the hunger for knowledge characteristic of the 94,000 legally licensed physicians at present constituting the A. M. A.

President-Elect Jabez N. Jackson, in his address delivered immediately after his installation as President, struck a popular note in his appeal for the further endowment of hospitals in order that the financial blow incident to illness might be softened for "the man who is a man, although rich or poor—the fellow who builds a world, generous to rich and poor alike." President Jackson referred, of course, to the existing economic condition which provides good hospital service for those who will accept charity and those who can pay without sacrifice, but which makes it difficult for those who are too proud to accept charity and yet who often remain hopelessly in debt after receiving the best hospital and nursing care in time of sickness.

The A. M. A. was especially honored by the presence of the President of the United States at its opening general meeting. The *Washington Post* in reporting the President's address stated, "President Coolidge praised the medical men as he has praised few other professions," and quoted as follows: "It is to your profes-

sion, in its broadest sense, untrammelled by the contentions of different schools, that the world may look for large contributions toward its regeneration, physically, mentally, and spiritually, when not force but reason will hold universal sway. As human beings gain in individual perfection, so the world will gain in social perfection, and we may hope to come into an era of right living and right thinking, of good will and of peace, in accordance with the teachings of the Great Physician." The President told of the heroism of those who have worked with deadly germs and permitted themselves to be inoculated with disease so that others might be saved, and cited examples of how the profession has advanced civilization.

On Tuesday afternoon the Association conducted exercises in the amphitheater at Arlington National Cemetery in memory of members of the A. M. A. who gave their lives for their country in the World War. Hubert A. Work, a former president of the A. M. A. and at present a member of President Coolidge's cabinet, was the honorary president of the day. The program included a prayer by a chaplain of the United States Navy, addresses by Baron de Cartier, Belgian ambassador, and Major General Charles P. Summerall, Chief of Staff of the United States Army, and appropriate music by the Marine Band and a baritone soloist. The exercises were concluded by President Wendell C. Phillips of the A. M. A. placing a wreath on the tomb of the unknown soldier. Baron de Cartier, after recalling that the first American soldiers to be killed in the World War were members of the medical corps, said, "These men who lie here have given their lives that others may live. To them an immeasurable debt of gratitude is due, not only by their comrades of the allied armies, but even by their adversaries, many of whom, left wounded on the field of battle, they rescued from the jaws of death at the peril of their own lives. How many thousands of men are alive today who, but for the ministrations of the medical corps, would have perished! How many homes, of both friend and foe, have been made happy by the return of their loved ones, saved through the efforts of those whom we have come to honor today! Their deeds live after them and are to them a tribute more eloquent than any that can be uttered by the lips of mortal man."

General Summerall, after referring to the peace-time ambitions of the physicians "who went over but did not come back," stated, "in war they sought to the limits of the power of man to heal the wounds of battle and to prepare better our manhood for the hardships and toil which were to be encountered on the fields of battle."

In spite of a drizzling rain, President and Mrs. Coolidge kept their appointment and greeted the 2,000 members and guests of the Association who gathered on the south lawn of the White House, Wednesday, at 12:30 p.m.

CHANGES IN MEMBERSHIP OF COUNTY SOCIETIES

The following changes have been reported to May 14:

ALLEGHENY: *New Members*—Stanley P. Balcuzak, 114 E. Main St., Carnegie; Harry L. Stollar, Elizabeth; Jual A. Keefer, 435 Sixth Ave., Pittsburgh; Bruce M. Griffin, 7138 Hamilton Ave., Pittsburgh; Rudolph Hanover, 358 Munson Ave., McKees Rocks. *Removal*—William H. Cameron from Pittsburgh to 511 Fifth Ave., New York, N. Y.; George H. Gillis from Yatesboro to Wiconisco (Dauphin Co.). *Resignation*—Stelios N. Sakarraphos, Chicago, Ill.; Grace Martin, China. *Deaths*—Carey J. Vaux, Pittsburgh (Univ. of Pgh., '99), April 15, aged 51; Carl V. Guffey, McKeesport (Univ. of Penna., '24), March 20, aged 29; David C. Huffman, Pittsburgh (Jeff. Med. Coll., '66), March 29, aged 84; Robert J. Murray, Sewickley (Jeff. Med. Coll., '67), April 5, aged 81; Leon Sadowski, Pittsburgh (Detroit Coll. of Med., '91), April 12, aged 58.

BEAVER: New Member—Theron L. Blackledge, New Brighton.

BRADFORD: *Death*—Charles L. Kenyon, Monroeton (Jeff. Med. Coll., '94), recently, aged 63.

BUTLER: *Removal*—Raymond L. Sheets from Bruin to Beaver Falls (Beaver Co.).

CUMBERLAND: *Death*—Samuel E. Mowery, Mechanicsburg (Univ. of Penna., '95), May 1, aged 66.

DAUPHIN: *New Members*—Park Berkheimer, Hummelstown; J. Ross Swartz, 236 N. Third St., George W. Hartman, 801 N. Third St., Harrisburg. *Transfer*—George W. Gault, 9 N. Second St., Harrisburg, from Perry County Society (formerly of Marysville); Albert E. Bower, Camp Hill, from Armstrong County Society.

DELAWARE: *Transfer*—Florence E. Kraker, 11 W. State St., Media, from Dauphin County Society.

FAYETTE: *New Member*—Fulvio Patella, 76 E. Main St., Uniontown.

FRANKLIN: *Resignation*—John W. Prather, Dumont, N. J.

INDIANA: *Removal*—George R. Lyon from Ebensburg to Heilwood.

LEBANON: *Deaths*—Charles P. Krum, Lebanon (Univ. of Penna., '21), March 27, aged 30; Frederick S. Kaufman, Lebanon (Univ. of Penna., '91), March 28.

LEHIGH: *New Members*—Ruth B. Newell Brown, Cementon; Raymond E. Heacock, 150 W. Broad St., Bethlehem; John J. Wenner, 402 N. 7th St., Allentown.

LYCOMING: *New Member*—Edward M. Dailey, Dushore.

MERCER: *Death*—Frank E. McElree, Greenville (West. Res., '09), April 29, aged 47.

MONTGOMERY: *New Members*—John McK. Mitchell, Bryn Mawr; Abraham M. Rapoport, 318 De Kalb St., Norristown; Rebecca M. Patterson, State Hospital, Norristown; Francis D. Ventura, Norristown.

MONTOUR: *Removal*—Robert A. Keilty from Danville to 1801 Eye St., Washington, D. C. *New Member*—Sydney J. Hawley, Geisinger Hospital, Danville.

NORTHAMPTON: *Removal*—Thomas E. Schadt from Hellertown to Maytown (Lanc. Co.).

NORTHUMBERLAND: *Transfer*—M. Edward Smoczynski, Mt. Carmel, from Philadelphia County Society.

PHILADELPHIA: *New Members*—Valentine M. Hess, 2008 Walnut St., Charles J. Prohaska, 5821 N. 7th St., Herbert Rovno, 5740 Florence Ave., Margaret H. Sutley, 834 Pine St., Philadelphia. *Transfer*—James E. Landis, 1008 Central Medical Bldg., Philadelphia, from Berks County Society. *Deaths*—John G. Clark (Univ. of Penna., '91), May 4, aged 60; Henry I. Dorr, Winchester, Mass. (Jeff. Med. Coll., '83), April 24, aged 83; Thomas A. Downs (Univ. of Penna., '64), recently, aged 91; E. Tillson Ward (Univ. of Penna., '86), April 20, aged 63; Wilhelmina T. Nelson (Woman's Med. Coll., '91), March 20, aged 79; Albert G. Miller (Univ. of Penna., '01), April 13, aged 49; Richard J. Phillips (Jeff. Med. Coll., '83), March 30, aged 65; George B. Massey (Univ. of Penna., '76), March 29, aged 70; John Mellor (Med.-Chirur., Phila., '95), April 6, aged 58; Edward E. Montgomery (Jeff. Med. Coll., '74), April 17, aged 78; William Samueli (Temple Univ., '12), recently, aged 49.

SCHUYLKILL: *New Members*—Earl F. Conlin, Minersville; Vincent A. Callery, Pottsville.

TIOGA: *Death*—David A. Patterson, Westfield (Rush Med. Coll., '97), April 6, aged 59.

WASHINGTON: *New Member*—John M. Steiner, Midway.

WAYNE: *New Member*—Ernest O. Chellis, Narrowsburg, N. Y.

YORK: *New Member*—Louis Jordy, 238 S. Duke St., York.

PAYMENT OF PER-CAPITA ASSESSMENT

The following payment of per-capita assessment has been received since April 14th. Figures in the first column indicate county society numbers; second column, State Society numbers.

1926				
May 7	Wayne	27	7588	$5.00
1927				
Apr. 15	Susquehanna	18	7340	5.00
	Mifflin	27	7341	5.00
	Washington	134–135	7342–7343	10.00
	Beaver	84–86	7344–7346	15.00
	Venango	51	7347	5.00
	Montour	27	7348	5.00
	Fayette	119–122	7349–7352	20.00
18	Venango	52	7353	5.00
	Washington	136	7354	5.00
	Cambria	160–161	7355–7356	10.00
	Crawford	47	7357	5.00
20	Dauphin	160	7358	5.00
	Westmoreland	150–154	7359–7363	25.00
23	Luzerne	275	7364	5.00
	Armstrong	54	7365	5.00
	Delaware	111	7366	5.00
	Luzerne	276	7367	5.00
	Lycoming	111	7368	5.00
25	Blair	94–100	7369–7375	35.00
	Northampton	132–134	7376–7378	15.00
	Indiana	53, 55	7379–7380	10.00
	Columbia	34	7381	5.00
	Lehigh	114–116	7382–7384	15.00
May 1	Luzerne	277	7385	5.00
	Philadelphia	1933–1987	7386–7440	275.00
3	Allegheny	1248–1267	7441–7460	100.00
5	Susquehanna	19	7461	5.00
6	Warren	43	7462	5.00
7	York	127	7463	5.00
	Fayette	123	7464	5.00
9	Lackawanna	225	7465	5.00
	Luzerne	278	7466	5.00
	Adams	27	7467	5.00
10	Northumberland	65	7468	5.00
	Wayne	29	7469	5.00
11	Lackawanna	226	7470	5.00
12	Potter	14	7471	5.00
	Dauphin	161–164	7472–7475	20.00
13	Montgomery	151–154	7476–7479	20.00
14	Mercer	72–73	7480–7481	10.00
	Delaware	112	7482	5.00
	Philadelphia	1988–2009	7483–7504	110.00

COMMITTEE ON SCIENTIFIC WORK

THOMAS G. SIMONTON, M.D., *Chairman*
Pittsburgh, Pa.

THE EYE, EAR, NOSE AND THROAT SECTION IN 1927

An exceptionally interesting program is being arranged for the Eye, Ear, Nose and Throat Section at the State meeting in Pittsburgh.

We have been fortunate in securing two guests of importance—Dr. John M. Wheeler, of New York, Professor of Ophthalmology at New York University, and Dr. H. I. Lillie, head of the Otolaryngological Department of the Mayo Clinic, Rochester, Minn.

Men of high standing have been secured to cover practically the whole field of eye, ear, nose and throat diseases with material which will be especially interesting to the members. The sinuses, mastoid, and larynx are being especially stressed.

COMMISSION ON COMPENSATION LAWS

LEVER F. STEWART, *Chairman*
Clearfield, Pa.

THE COMMISSION'S EFFORTS TO IMPROVE PENNSYLVANIA'S COMPENSATION LAW

A brief recitation of the Commission's effort to improve the Pennsylvania compensation law, to the point of having it compare favorably with the laws of other states by making provision for more adequate medical and hospital care of injured employees, will give the Society's membership a more intelligent conception of the work necessary to place the State of Pennsylvania and its laborer on a parity with other states, and in a public-health position comparable with Pennsylvania's standing and achievements in other public-health efforts.

In the past, Pennsylvania's Department of Health has done much to improve sanitary conditions throughout the State. It has reduced the occurrence of such diseases as typhoid fever by investigating the causes of epidemics. Sanatoria have been provided for the cure of the tuberculous. Genito-urinary and prenatal clinics have been established and the results have been gratifying. Lately our Department of Health has entered the field of dental and mental hygiene. The reclaiming of the injured properly falls under the administration of our compensation

law. That there should be such a discrepancy between the excellent work of our State Department of Health and our State Compensation Bureau is deplorable. No public-health move in the State of Pennsylvania merits as much consideration as the reclaiming of the injured employee, and no other public-health activity offers a more fertile field for work. It would range from the simplest form of surgical procedure to the most serious, and combine the work of building up morale as well as carrying out reëducation so as to make gainful occupation again possible. No other public-health move would result in such a rich profit in actual money, saved in weekly stipends for the injured, or be so effective in preventing overcrowding of our penal and charitable institutions.

The Commission placed the recommendations passed by the House of Delegates of the 1926 Session in the hands of the State Society's special legislative committee. Following this the Commission devoted its energy exclusively to informing the Society's membership through these columns as to the changes sought in the law and the reasons surrounding them. Much of what was written was designed to explain to the laymen the high aims of our State Society. At a later date four county medical societies passed resolutions objecting to certain recommendations of the Commission, the most objectionable being the provision by which each employer was conceded the right to select the physician looking after his injured employees. Had the Commission known of this objection, it never would have included it in its recommendations. This provision has always been and *always will be* part of the law, and it was mentioned for the purpose of convincing those whose help we needed of the fairness of our position. No compensation commission, acting primarily for the good of the State as a whole, can make recommendations caring for the problems of competition arising between doctors in communities. Therefore, the subject of selecting a physician should forever be a closed one in compensation legislation.

The Commission's chairman met on two occasions with the special legislative committee and representatives of the State Hospital Association. At the second meeting the physicians and hospitals were advised to ask for unlimited medical and hospital expense. This thought was against the best judgment of the Commission, but was concurred in by its members when advised that such a request had good prospect of being accepted and made part of the law. Chairman Hartman of the special legislative committee requested the Chairman of the Commission to take an interest in the Commission's legislative aims and suggested that he take whatever action was deemed necessary.

Following this the chairman of the Commission arranged a conference with Colonel Eric Fisher Wood, chairman of the Executive Committee of the Republican State Organization. Mr. Joseph R. Grundy, or his designated representative, was asked to attend this conference, to which representatives of the State Hospital Association were invited. Neither Mr. Grundy nor his representative attended. Our aim was to give the State Organization and the representative of manufacturing interests of the State our ideas, and to give all an opportunity for free discussion of this problem which is of such great economic importance to the entire State. It was our hope to call attention to the failure of the manufacturing interests of the State to salvage their most valuable waste product, the human cripple.

No doubt was ever entertained of our ability to show these gentlemen where the vast sums of money, spent to hold political control of the State, could be spent with greater profit to the State and its inhabitants, in the care of employees crippled in the State's industries. We felt confident of showing that a more lasting political organization could be built on the gratitude of reclaimed cripples and their friends than on vacillating "ward heelers" of vicarious tastes. We were certain of being able to show how large sums could be saved to the manufacturing interests of the State by making into law what the manufacturer, lacking an understanding of rehabilitation surgery, has failed to see.

Our meeting with Colonel Wood was characterized by his frank explanation of what had been done in compensation legislation. The Colonel explained the changes agreed on by Capital and Labor which were embodied in the Sordoni bill as a compromise resulting from long discussion between these two interests. Colonel Wood frankly explained that discussion on this particular bill could not be reopened because of the compromise which it represented. This conference developed that Mr. Mackey had presented some of the Commission's recommendations and had sought unlimited medical expense. All of these recommendations were rejected by the capitalistic interests of the State. At a later conference between the representatives of the State Hospital Association and the chairman of the Commission, a bill asking much less than originally requested was agreed upon. Later the Hospital Association asked to be released from its agreement on the legislation in question. It later developed that the Hospital Association modified the amendments written by the Com-

mission's chairman and had them presented for passage.

Following the defection of the State Hospital Association, the chairman of the Commission on his own initiative drew up Senate Bill No. 945, which was presented through the courtesy of Senator Scott. It provided recognition of the physician and hospital at law, payment of the physician for service regardless of whether the service is rendered in a hospital or elsewhere, and an additional payment up to $100 for the physician and $100 for the surgeon after the end of the thirty-day period, if it could be shown that such further treatment would reclaim the injured employee to the point of again becoming a wage earner. Just prior to the hearing on this bill, representatives of the State Hospital Association learned that all of their bills had failed in passage. They then spoke in favor of the Scott Bill, which carried the minimum demand that the doctor can make for improvement in our compensation law, and which made commensurate provision for the hospital in carrying out human salvage.

From the above, it will be seen that each keynote of the scale was sounded in covering maximum and minimum demands. All of them failed of passage. The bill presented by Senator Scott went farthest. It passed the Senate and passed second reading in the House.

Some valuable observations can be drawn from this record of events:

1. Practical experience seems to show that it would be the better part of wisdom to build on very reasonable demands, with the hope of bringing about a gradual change.

2. Any effort to introduce legislation for the good of the people of the Commonwealth and based on the wisdom peculiar to the physician, must find the physicians of the State a unit on the changes advocated.

3. Labor must be fully informed as to the value of reconstruction surgery, and the possibilities of its enabling employees to return to gainful occupation.

4. The physician must not again make common cause with the hospital.

No greater opportunity for service in the cause of humanity is offered to the surgeon of today than the reclaiming of injured employees. The machinery for this can be most easily provided through our compensation law. With adequate provision for reconstruction surgery, literally thousands can be taken from the overburdened arms of charitable and penal institutions that receive them when the five-hundred-week period of total disability has expired and left them without means of support.

County Society Reports

ALLEGHENY—APRIL

The sixty-second annual meeting of the Society was held in the ballroom of the Hotel Schenley, Pittsburgh, on Tuesday evening, April 12, 1927. Nearly 500 members attended the banquet.

Dr. H. W. Albertson, President of the State Society, read a paper, "Some Present-day Problems in Medicine," in which he stressed the fact that outside influences are gradually encroaching upon the right of the physician to administer medication to the patient. He found fault especially with the nursing profession, whom he accused of "playing the doctor" and giving orders instead of carrying out orders prescribed by the doctor. He cited and read extracts from resolutions passed by his county society in which a board was elected to study, govern, and establish clinics under its supervision. He urged other counties to adopt this procedure.

President-elect Dr. A. C. Morgan gave a short talk on "The Doctor." He regretted the attitude toward the country doctor by his city colleague and asked that the expression "country doctor" be dropped. He stated that the doctor practicing in the rural districts is superior to the city physician because he is placed upon his own initiative and resourcefulness more often, and he is constantly being confronted with problems demanding immediate and self-solution. He deplored the lack of physicians practicing in the country districts and the modern idea of specialism. Modern education of the physician is predigested and lacking in the bedside instruction of the preceptor who is now extinct. He pleaded for more general medical training, more actual bedside experience, less dependability upon laboratory diagnosis, and less predigested medical education as a prerequisite for entrance to our medical schools.

Captain O'Hay, of New York City, held his audience for two hours during his talk on "Life and Laughter."

The annual election resulted as follows: president, Charles H. Henninger; first vice-president, Arthur H. Gross; additional vice-presidents, T. E. Manley, W. A. Forster, W. H. Gardner, and N. F. Phillips; secretary, Alexander H. Colwell; treasurer, Robert L. Anderson; district censor, Richard G. Burns; judicial board, James A. Lindsay; directors, H. E. McGuire, E. W. Willetts, and William W. G. Maclachlan; delegates to State Society, A. H. Colwell, James A. Lindsay, Clement R. Jones, Ralph L. Hill, E. W. Willetts, and Frederick M. Jacob; alternates (to serve one year), C. B. McAboy, H. T. Price, E. P. Buchanan, L. H. Landon, T. E. McConnell, A. J. Bruecken, J. S. Crawford, B. R. Almquest, C. E. McKee, W. M. Woodward, F. H. Rimer, J. D. Iams, M. A. Slocum, A. E. Bulger, A. P. D'zmura, H. S. Van Kirk, S. A. Chalfant, B. Z. Cashman, G. S. Bubb, T. W. Grayson, H. C. Westervelt, A. H. Gross, L. H. Thompson, D. B. Ludwig, W. R. Marshall, and T. M. Mabon.

The regular monthly meeting of the Society was held on Tuesday evening, April 19.

Dr. H. G. Schleiter: Clinical Manifestations of Rheumatic Heart Disease.—Rheumatic infection is of an unknown origin, although other organs than the tonsils can produce it. It is characterized by the multiplicity of its manifestations and a tendency toward recurrence with the heart bearing the brunt of the attacks. The heart may present symptoms of myocarditis, pericarditis, or endocarditis. As a matter of fact, all parts of the heart are involved (carditis). This is especially frequent in children. The time between infection and cardiac involvement is variable, with the younger patient

more prone to early cardiac involvement. The clinical features of a rheumatic heart are: evidence of cardiac involvement during the progress of infection, and characteristics of chronic heart disease, which show it to be of rheumatic origin.

The points suggestive of cardiac involvement are: increased size with apical systolic murmur or short first sound; rapid pulse out of proportion to fever; pericardial friction; irregular pulse, and electrocardiographic changes; in addition, the presence of unexplained fever, pronounced leukocytosis, secondary anemia, and subcutaneous nodules.

In oft-repeated cardiac infections over years one encounters: mitral insufficiency (most frequent—usually not serious); mitral stenosis (indicates rheumatic origin—a serious, usually progressive lesion); aortic valvular lesion; and myocardial insufficiency (its only connection with rheumatic infection is probably the association of other lesions).

Several factors influencing the progress of rheumatic heart disease are: recurrent infection (causing progression of lesions); physical strain (using the limited reserve); and auricular fibrillation (throwing an increased burden on the circulation).

Dr. James D. Heard: History of Cardiac Crusade.—The first report covering the prevention and relief of heart disease was published by Dr. James A. Connor. The organization of the Association for the Prevention and Relief of Heart Disease was the logical outcome of a series of attempts to relieve these conditions. The first direct measure was established at Bellevue Hospital in 1911—an out-patient heart clinic. It was held in the evenings to secure better attendance from the working classes.

The first trade school for cardiac convalescents was established at Sharon, Connecticut. In 1915 the Association for the Prevention and Relief of Heart Disease was established with Dr. Connor as president. The work of the association was successful and caused widespread interest throughout the United States and Canada. In 1924 it was incorporated, and at present twenty-five cities on the continent are taking part in its campaign. In May, 1925, the first official bulletin was published. In November, 1922, the Allegheny County Medical Society became interested in the matter, and in February, 1925, a commission was appointed to take action on it. Since then various out-patient clinics for cardiac diseases have been established at local hospitals, patterned after that of the Bellevue Clinic. Much of their success is attributed to the fact that they are a component part of our County Medical Society.

L. G. BEINHAUER, M.D., Reporter.

BERKS—APRIL

Dr. J. Torrance Rugh, of Philadelphia, delivered an address before the Society on "Tuberculosis of the Hip; its Treatment and Diagnosis." We see today about one-half of the number of cases of hip-joint tuberculosis seen twenty years ago. Among the reasons for the decrease that may be mentioned are a good milk supply and education of the public and physicians. It is very important to recognize the disease in its early stage. One of the causes is a slight injury, not a severe one, as the severe injury sets up a reaction which prevents tuberculosis, while a slight injury creates less resistance in the part. Even when not caused directly by an injury, it will localize tuberculosis in a part.

Tuberculosis is always a chronic process, slow and gradual, and does not have an acute onset. Pain is not an early symptom, but late, and then it is a referred pain, often to the inner side of the knee and associated with a limp. There is usually a temperature of 99° to 100°; if above 102°, there is a mixed infection.

Muscle spasm and rigidity involve all the muscles of the joint, while the motion of the joint is restricted in every direction. The disturbance of function, or limp, is due to muscle spasm, the stronger muscles pulling in their respective directions.

The blood shows no leukocytosis. After a child has reached the age of two years, the tuberculin test is of no value. In making a differential diagnosis, it should be borne in mind that rheumatism is rare in early life, and more than one joint is involved. In septic arthritis a focus of infection is deposited in one part of the body, as in the end of a bone, the pain is acute, and there is a temperature of 103° to 104°, which is unlike tuberculosis.

The introduction of Murphy's solution of formalin and glycerin will relieve a septic abscess, but not tuberculosis. In articular bone arthritis there may be a lesion in one joint, but not early atrophy.

Coccyplano is often confused with a tuberculous hip, but here there is no atrophy and motion is limited only in some directions. The complications are deformity and mixed infection. What appears as an abscess is broken-down, granulation tissue, and should not be opened unless it troubles the patient. As soon as pyogenic germs enter a tuberculous area, they produce a mixed infection and are very hard to handle.

Treatment calls for absolute rest by fixation, which is of two types—surgical and mechanical. Nourishment is of great importance. The elimination of all function by surgery is not justified in all cases. It is better to secure an arrested case with 50 per cent function. Sunlight is the most potent factor of all in building up the body. Cod-liver oil improves the nutrition and promotes nourishment. Give calcium, but do not rely upon it, as only a certain amount will be appropriated by the blood. The time usually required for a cure is about three years.

Drs. Hirshland, Livingood, Winston, Funk, and Fox participated in the discussion.

Representatives of the Welfare Association spoke on the Community Chest, and the Society decided to form a team to canvass for funds among the physicians.

CLARA S. KEISER, M.D., Reporter.

BLAIR—APRIL

Instead of the regular monthly meeting, the members of the Society attended a clinic on nervous diseases at the Blair County Hospital, April 26, which was conducted by Dr. Theodore Diller, of Pittsburgh, and Dr. H. J. Sommer, Director of the Hospital.

Dr. Diller stated that the causes of insanity do not differ essentially from the causes of other diseases. Their action, however, is much more complicated. The brain, as an organ, is subject to the same influences and conditions as other organs, only its expression of illness varies, and much of what is pain in other organs is here manifested as symptoms of a very different nature. There are two classes of causes—predisposing and exciting. The syndromes of melancholia, mania, paranoia, dementia, and amentia, occurring together or separately, may result from the action on the cerebral cortex of variously disordered bodily processes.

Among the exciting causes of insanity are those of acute disease, intoxications, overwork, insufficient food, exposure, emotional shock, and continued severe pain. Under predisposing causes are found two classes; viz.,

individual, including inherited and acquired predisposition, and general, including age, sex, civil condition, climate, and civilization.

Several patients were exhibited to demonstrate the various types of dementia, including dementia præcox.

Dr. Sommer related his experience with the malaria treatment of paresis. The malaria is produced by the intravenous injection of a few c.c. of blood taken from a patient having active malaria, and thus may be transmitted from one syphilitic patient to another. Malaria transmitted in this manner assumes asexual characteristics, eliminating the danger of the disease being spread by mosquitoes. The results from this treatment have been very gratifying, with complete remission in about thirty-two per cent of the cases treated. Many are able to return to their former line of work, while others are fitted for some form of manual labor. Several of the patients having undergone the treatment were presented, and all showed a marked degree of improvement.

A luncheon was served at the close of the clinic.

R. V. Silknetter, M.D., Reporter.

CAMBRIA—MARCH-APRIL

The meeting of March 10th was held in the Y. M. C. A. building, Johnstown. Dr. R. J. Behan, of Pittsburgh, gave a talk on "Postgraduate Study in Europe," illustrated with motion pictures of operations performed by leading European surgeons which demonstrated that the operative technic of Europe does not differ greatly from that used in America.

The following were elected members of the Society: Drs. W. D. Rhodes, Conemaugh; C. J. Bibb and F. J. Schofield, Portage; F. O. George and D. W. Truscott, South Fork; C. B. Jones, Summerhill; W. W. Livingston, Dunlo; and V. J. Mulvehill, Carrolltown.

The scientific program of the meeting held in Johnstown on April 14th was given by the staff of the Spangler Hospital. Dr. B. F. Bowers presented the histories, treatment, and after-results of several cases of fracture, emphasizing that early passive motion should be used in the treatment of these cases. Dr. D. S. Rice read a paper on "The Effect of Florida Climate on Pulmonary Disease."

Dr. H. W. Salus made a detailed report of the work done by the legislative committee during the past month. The committee recommended that the medical profession have a paid legal representative to look after their legislative interests.

W. B. Templin, M.D., Reporter.

LUZERNE—APRIL-MAY

The regular meeting was held in the Society Building, April 6, President G. R. Drake in the chair. The essayist was Dr. K. Winfield Ney, of New York City, who gave a lantern demonstration of "Traumatic Lesions of the Nervous System, Including the Brain and Peripheral Nerves."

Dr. Ney: Musculospiral nerve palsy always has one single sign confirming the diagnosis; namely, inability to extend the thumb. If a patient claims inability to raise the arm and can still extend the thumb, he does not have musculospiral nerve palsy. The median nerve controls the adductor pollicis muscle. Paralysis of the median nerve, even by the most peripheral lesion, causes loss of ability to bring the thumb over the palm into opposition with the fingers. In addition, the patient with median-nerve paralysis cannot flex the index finger, but the characteristic striking sign of the lesion is loss of ability to oppose the thumb.

Paralysis of the ulnar nerve causes atrophy of the small muscles of the hand and inability to perform the finer lateral movements of the fingers. Such a patient cannot make a cone of his fingers. The four-finger cone is made by muscles controlled by the median nerve; the five-finger cone is made by muscles controlled by both the ulnar and median nerves. If a patient can make a four-finger cone, but not a five-finger, he has loss of the median nerve. If he cannot make a four-finger cone, he has loss of the ulnar nerve. If he cannot make a cone and cannot bring the thumb across the palm, he has loss of both median and ulnar nerves. These tests are easily applied even with splints in position.

The sciatic is the only nerve in the lower extremity exposed to trauma. Injury to this nerve above its bifurcation results in atrophy of the hamstrings. Destruction of the sciatic or its two divisions, the internal and external popliteals, results in paralysis of the foot. If the toes cannot be bent down, then there is paralysis of the internal popliteal. If the toes cannot be extended, then there is paralysis of the external popliteal.

Head Injuries: Obstruction of the aqueduct of Sylvius gives internal hydrocephalus. If at one of the two foramina between the lateral and third ventricles, a unilateral hydrocephalus will result. The cerebrospinal fluid must get into the subarachnoid space to be absorbed and so relieve the intracranial pressure. After trauma, the subarachnoid space may be occluded by an exudate of red and white cells. The normal intraventricular pressure is about 8 mm. of mercury, and this may run up as high as 60 mm. In cerebral tumors it is usually 30-40 mm.; in cerebellar tumors, 25-30 mm. Pressures of 18-20 mm. show characteristic changes. Concussion following head injury with unconsciousness means brain injury.

When intracranial pressure is increased, the brain tissue goes through an irritative stage and then a degenerative stage. As the pressure increases, the pulse during the irritable stage becomes slower and slower, and the blood-pressure higher and higher. When they begin to get to the paralytic stage, the pulse becomes more rapid and the medullary centers commence to fail. Total unconsciousness, immobile pupils, rapid pulse after slow and stertorous breathing mean that there is very little to be done.

The treatment is of three types, all designed to relieve increased intracranial pressure: First is the use of concentrated salt solution. We use six ounces of a saturated solution of magnesium sulphate as a retention enema. This is good when you do not want to stir the patient up much. Second is repeated spinal puncture to give drainage in subarachnoid block. Third is decompression under a local anesthetic. This serves to draw fluid off for several days.

The after-effects of head injuries are shown usually as a traumatic epilepsy due to pressure by scar tissue, by fluid retained within a sacculation, or by a cystlike structure. It is cured by excising the scar and cyst wall from the attachment to the dura mater, etc., and transplanting fat to cover the defect during the healing period.

There is very little to be done for spinal-cord traumatic injuries.

Dr. Stewart: Dr. Ney's remarks have brought to my mind an interesting case in which a man was injured in a collision between a train and a street car. He was cared for by the Traction Company's physicians, who reported that the patient had a musculospiral injury. Both physicians died in the meantime, and the man had

carried his arm in a sling for two years when I saw him. He had all the symptoms, so far as I could see, of a musculospiral injury. He could not lift his arm, and had atrophy and wrist drop. The Company settled for $5,000, and in two months that man was driving his automobile and seemed cured. So these little points of diagnosis are very important.

Dr. Freeman: A young man was working on a building, and fell. He had a linear fracture of the skull, and was treated in the hospital about one month. He then tried to go to work, but could not because of headaches. He was reported as a malingerer, and was said to be well enough to go to work. He was operated upon by Dr. Ney, was in the hospital about a week, and in a month he returned to work without headaches and has been at work since then.

Dr. Ney, in closing: The point of election in decompression is the right side in a right-handed individual, and subtemporal. In these types of cases there is a moderate degree of pressure, as in the last case cited. They get very little sympathy and are called malingerers. This type of traumatic internal hydrocephalus has not been recognized. An actual increase of intracranial pressure can be demonstrated, relief of which results in a cure. We drain the temporal lobe with a piece of rubber glove, and leave it forty-eight hours. The drainage during this time is constant.

At the regular meeting, April 20, the coming campaign of the Welfare Federation was endorsed and the active support of the Society was pledged. (Subsequently the local chiropractors' association voted to offer the Federation $2,000 worth of their services, about $100 worth of service each, as their contribution to charity.)

Dr. Charles H. Miner, former Secretary of Health: Pennsylvania's Progress in Public Health and Preventive Medicine.—The first hospital established in the United States was the use of a private house in Philadelphia to receive yellow-fever patients in 1751. The Philadelphia Board of Health was organized in 1794, and from that city radiated public-health endeavor. In the early days of this Commonwealth, visitations of devastating scourges occurred periodically. Smallpox was brought to America in the ship with William Penn in 1682 and caused the deaths of nearly one third of the passengers envoyage. Vaccination was begun in 1801. From 1807 to 1882 there were 13,314 deaths from smallpox in Philadelphia alone. In 1926 there were but 58 cases of smallpox in the entire state of Pennsylvania, thanks to compulsory vaccination.

Cholera in 1832 killed 935 in Philadelphia. Today this disease is definitely controlled by seaport inspection, by safe water supplies, and Hoffkine's protective serum. In 1793, out of a population of 50,000 in Philadelphia, over 8,000 died of yellow fever and 17,000 fled the city. At one time there were only three physicians able to work out of their houses, and at that time there were not less than 6,000 persons ill with the fever. The cause of yellow fever was not discovered until 107 years later by the Walter Reed Commission at Havana in 1900. Today yellow fever has been practically removed from the face of the earth by sanitation. Last year there were three cases in Brazil and a few, supposedly yellow fever, in Africa. There were no other cases in all the world.

In 1906 the diphtheria death rate in Pennsylvania was 34.1 per 100,000 and in 1926 it was 8.7—a reduction of 70 per cent. The rapid decline in the last four years from 16.7 in 1922 to 8.7 in 1926 is largely due to immunization of the children of the State by toxin-antitoxin. Malaria was overshadowed by the more devastating outbreaks and probably, being always present, received little public notice. In August, 1898, Dr. C. P. Knapp, of Wyoming, told me he had charge of 150 cases; in 1900 he had none. There has been a reduction in scarlet-fever deaths in Philadelphia from 214 per 1,000 in 1861 to 3 per 1,000 in 1925. Since the establishment of the State Department of Health, the death rate from tuberculosis has fallen 48 per cent, and is now in sixth place of killing diseases. In this connection, extension clinics are being established in the State in addition to the 100 tuberculosis clinics already in operation. In our State sanatoria, 2,000 patients are treated daily. The greatest development in the last few years has been the extensive use of heliotherapy.

The purification of the water supply, compulsory pasteurization of the milk supply, an adequate sewerage system, and the painstaking study of each case discovered, will abolish typhoid fever from any city. Dr. Benjamin Lee, in 1894, wrote that "to two Wilkes-Barre physicians belongs the honor of the two most practical investigations into the causation of typhoid fever to be found in medical literature." The first was the report of the typhoid-fever epidemic in Plymouth written by Dr. Lewis H. Taylor, tracing the epidemic of 1885 to contaminated drinking water. The second was the report of an epidemic in Company F of the old Ninth Regiment in camp at Gettysburg in 1894, written by Dr. W. G. Weaver, and tracing the infection to one man who worked in the company kitchen.

The death rate from puerperal causes remained more or less stationary, at an average rate of 6.5 per 1,000 confinements, from 1906 to 1920. Not all births are being reported. If we had 100 per-cent birth registration, we should find ourselves with lower infant mortality rates. Pneumonia is the greatest cause of death among the infectious diseases. Heart disease shows a general increase from 134 in 1906 to 177 per 100,000 in 1925, and is now the greatest single cause of death in Pennsylvania. Many cases of heart disease are preventable and some are wholly curable.

Dr. G. A. Clark: In 1921, the year before the first toxin-antitoxin campaign, there were 279 cases of diphtheria in Wilkes-Barre with 22 deaths. In 1926, there were only 47 cases and 2 deaths. To date this year, we have had 39 cases reported with 3 deaths charted against Wilkes-Barre. One of those was in the Municipal Hospital brought in from Midvale. Seventeen of the 39 cases were from the new part of the city, formerly Miners Mills and Parsons, so, really, we have had only 22 cases in Wilkes-Barre. We have had 23,000 to 24,000 children treated in the three toxin-antitoxin campaigns in the territory covered by the Welfare Federation from Wyoming to Warrior Run on both sides of the river.

Dr. Whitney: If Dr. Miner had done nothing more in his administration than to insist on the use of toxin-antitoxin, he would have performed a wonderful feat. In Plymouth, we have not had a single case of diphtheria since the campaigns.

Dr. Kocyan: The puerperal death rate for the State of Pennsylvania is not so great as in some other states that claim better work. The best piece of work, so far as the mortality in puerperium is concerned, is the bold stand taken by the State Department of Health in the midwife question. This helped reduce the mortality here as it did elsewhere. It certainly threw out of commission many who were absolutely incompetent. After three years of midwife control, the mortality was reduced in Luzerne County to 3.4 per 1,000.

Dr. O'Donnell: If you will notice, you will see that the large dairies are using large tanks for hauling

milk. There has been a question whether these tanks are cleaned daily and whether they are iced on the trip. The second phase of the milk question is this: I have watched them load the wagons with crate upon crate of bottles, but have never noticed ice in the wagons. Most of our milk is delivered between three and four o'clock in the morning. Most people do not eat breakfast then, and so the milk stands on the porch for several hours, probably in the sun. I would raise the question whether delivering the milk un-iced, at an hour when it cannot be received and cared for by the housewife, is not a bad practice.

Dr. Clark: The milk as it leaves the station is ice-cold after pasteurization. It is not possible to ice the wagons. Delivery in the early morning is better than during the forenoon. I know that the tanks are cleaned thoroughly by steam between trips.

A regular meeting was held in the Society Building, May 4th, with President G. R. Drake in the chair.

Dr. A. G. Hinrichs, Pittston: Hematuria as a Urological Problem.—The causes of hematuria can usually be divided into three major groups: the systemic, the juxta-urinary, and lesions of the genito-urinary tract proper. Of the systemic causes syphilis is very important. To the second group belong diseases of the appendix and the internal female genitalia. The third group is the most important.

Hematuria due to neoplasm of the kidney or bladder is usually profuse and intermittent, made worse by exercise, and not relieved by rest, while that of renal tuberculosis is accompanied by pain which is often a true renal colic. Bleeding, colic, and pain of renal calculi are relieved by rest. The effect of rest upon vesical stones is so marked that it is a diagnostic sign of great value. Hematuria is characteristic of practically all bladder tumors. It may be distinguished from that resulting from stones and tuberculosis by being neither preceded nor accompanied by frequency, pain, or other symptoms. Bleeding from a vesical neoplasm is typically intermittent.

Never be satisfied with a diagnosis of "essential hematuria." This term has been discarded in favor of "hemorrhage from minute foci." Cystoscopy is all-important in clearing up the source of hematuria. The bleeding stage should not be allowed to pass without a cystoscopic examination. Ureteral meatoscopy is of more value than catheterization in determining the source of renal bleeding. Should the hemorrhage be profuse, the repeated washing out of the bladder with the vesical origin of the bleeding.
hot boric-acid solution with a little adrenalin may make cystoscopic examination possible. If these measures fail to secure satisfactory vision, you can be certain of

Never treat hematuria expectantly, for it is never negligible and its cause should always be investigated. Always regard symptomless hematuria with suspicion of malignancy.

Dr. J. W. Geist, Wilkes-Barre: Diagnosis in Diseases of the Skin.—The eruption should always be studied in broad daylight with the patient stripped. No examination is complete unless the mouth is included. It is a cardinal rule to search for the primary lesion. Lesions may be altered by scratching or by secondary infection. As in the lungs, so in skin lesions do progressive pathologic changes occur. In the skin, congestion and edema are represented by erythema, vesicles, bullæ, and edematous papules; consolidation, by papules, tubercles, and nodules; abscess formation, by pustules and ulcerations.

The skin like other organs tends to protect itself and does so by secondary lesions called scales, crusts, lichenifications, and pigmentations. The classification of cutaneous diseases is based upon these characteristic elementary lesions. After these have been determined, the clinical type is decided from their location, mode of grouping, and modification produced secondarily.

Sometimes a knowledge of the histopathology of the skin eruption may be a positive differential aid. Thus psoriasis, psoriatic syphilids, and psoriatic seborrheic eczema, are often confounded. But the lesion of psoriasis, when gently curetted, will elicit punctate hemorrhages from the traumatized, hypertrophied vascular papillæ of the derm; the serous oozing of the interstitial edema in the mucous body of the epiderm in seborrheic eczema; the diffuse bloody ooze from the cell in filtrated traumatized syphilitic papules.

Never fail to think of syphilis in lesions resembling alopecia areata, lupus vulgaris, keratosis on the palms and soles, or impetigo in adults. On the other hand, do not confound syphilis with hydroa of the buccal mucosa, geographic tongue, buccal herpes, or lichen planus of the mouth; pityriasis rosea for the macular rash of secondary syphilis; or the papules of facial acne for syphilitic papules.

In regard to less serious affections, it is well to remember that the ringworm fungi may vegetate at any point on the body and produce lesions altogether different from the typical round lesions common to them. In children all furfuraceous scalp conditions, or loss of hair, call for mycologic study. Itching, no matter what the social status of the patient may be, always means first the elimination of any parasite. The correct diagnosis of an eczema is always important, because to irritate it with unsuitable drugs simply leads to an exaggeration of the condition. Bizarre eruptions of any sort should lead to an exhaustive inquiry into the question of drug ingestion.

Dr. Mayock: Some one has said that cystitis as a diagnosis belongs to the dark ages of medicine before the cystoscope turned on the light. The same might be said of hematuria as a diagnosis. I had one case of essential hematuria a few years ago. I saw a woman exsanguinated from bleeding. The cystoscope showed the blood coming from the left kidney. All methods I tried failed to show the cause. We used thromboplastin which seemed to control the hemorrhage nicely. She was out of the hospital only a short time when it all started again. Functionally the kidney seemed all right. We then did a nephrectomy. The gross examination was negative and the laboratory never found anything wrong with it. It saved the woman, but in every sense this was essential hemorrhage.

Lewis T. Buckman, M.D., Reporter.

LYCOMING—MARCH-APRIL-MAY

The scientific program of the March meeting, held at the City Hall, Williamsport, on the 11th, consisted of a "Symposium on Oral Foci of Infection" by members of the staff of the Geisinger Memorial Hospital. The subject was discussed by an internist, a dentist, and a pathologist, as follows: Dr. C. E. Ervin—"Some Clinical Manifestations of Foci of Infection," including interesting case reports; Dr. B. Vastine, of the dental department—"Some Definite Oral Foci of Infection," illustrated with lantern slides; Dr. Robert Keilty—"The Bacteriologic Problem of the Mouth as a Focus of Infection."

At the meeting held April 8th, Dr. Jonathan M. Wainwright, of Scranton, discussed the subject "Cancer," including theories as to etiology, especially Gye's

hypothesis, and presenting his collection of unusual slides of carcinoma of the breast. These slides comprehended complete sections of the breast, and showed in some instances more than two separate malignant growths, as well as extension into and through the pectoralis muscles in cases in which apparently these structures had not been invaded. Discussion was opened by Dr. A. F. Hardt, of Williamsport.

Dr. H. W. Albertson, president of the State Medical Society, discussed the problems and accomplishments of the Society during the recent session of the State Legislature.

At 6:30 a testimonial dinner in honor of Drs. Albertson and Wainwright was held at the Lycoming Hotel. Following an informal discussion of questions bearing on public policy and the relation of the profession to health organizations, there was a showing of moving-picture films on the manufacture of diphtheria antitoxin.

The May meeting of the Society consisted of the Spring Clinic Day meeting with Dr. O. H. Perry Pepper, of Philadelphia, as the speaker. The clinic was held at the Williamsport Hospital Friday morning, May 13th, when Dr. Pepper presented a very interesting clinic of medical cases.

At 12:30 luncheon was served at the Park Hotel. Immediately following this, the formal meeting was held in the Park Hotel ballroom. Dr. Pepper chose as the subject of his paper, "The Place of the Blood Count in Diagnosis and Treatment." He discussed first pernicious anemia, describing the blood count and emphasizing the fact that the same blood count may be obtained in severe secondary anemias. He reported a case of anemia with a color index of 2, and with a typical blood picture of pernicious anemia. The patient died a year later of gastric carcinoma. In this case, the marked secondary anemia was due to the carcinoma.

Another patient with marked anemia, due to the hematemesis of Banti's disease, presented a blood count similar to pernicious anemia, which quickly changed following transfusion and splenectomy.

The point was stressed that the blood picture is of little value in the diagnosis of pernicious anemia without the clinical symptoms of the disease. Pernicious anemia may also be diagnosed in the absence of anemia, either during a remission or early in the disease. Glossitis, anacidity, and cord changes are always to be considered in the diagnosis.

The diet of Minot and Murphy is of great value in the treatment of pernicious anemia. Cooked calf's liver should be taken daily up to 250 grams. Milk has practically no stimulating effect on the blood-making organs. Beef or mutton should be given in the amount of about 125 grams daily. Fresh vegetables such as lettuce or spinach and fruits to the amount of 250 to 300 grams of each daily are helpful. Butter and cream are of small value. Bread, potatoes, and cereals may be used as required. The patient may take 340 grams of carbohydrate, 135 grams of protein, and 70 or less grams of fat daily. The total calories should be between 2,000 and 3,000 daily.

The blood count is of value in the polycythemia of severe burns and in pyloric stenosis. Phenylhydrazin is useful in the treatment of true polycythemia.

Leukemia is to be differentiated from leukocytosis, and the blood count is not always the last word in the differentiation. Cerebral hemorrhage, paroxysmal tachycardia, and ruptured ectopic gestation are examples of conditions producing leukocytosis, but not necessarily infection. Hemorrhage on a serous surface produces a noninfectious leukocytosis. Intoxications, as in uremia and diabetic coma, produce leukocytosis. In whooping cough complicated by pneumonia, the white-cell count may rise to 200,000, although the patient has no leukemia, but a lymphocytosis. In acute infectious mononucleosis, the lymphocytosis may resemble the blood picture of leukemia. Leukemia may be present with a normal white-cell count. Priapism is frequently an early symptom.

Leukopenia, besides occurring in typhoid fever, malaria, and Banti's disease, occurs in sepsis with an overwhelming infection. "Agranulocytic angina" is really the leukopenia of overwhelming sepsis.

In conclusion, Dr. Pepper stated that the blood count alone is not sufficient to make the diagnosis in a blood disease; the clinical symptoms and history are of greater value. The blood count is an extremely valuable aid, but should not dictate the diagnosis.

Dr. R. K. Rewalt, Williamsport, reported a case of lymphatic leukemia. Dr. W. E. Glosser discussed the question of vaccine obtained from the intestinal flora of patients with pernicious anemia. He also mentioned the use of eosin intravenously in cases with cord changes, with good results.

Dr. Pepper, in closing, stated that the basis for the use of vaccines is that the anacidity produces a change in the intestinal flora. Perhaps the Welch bacillus is responsible for the gas formation in these cases. The intestinal tract is the most likely focus for the development of pernicious anemia.

W. E. DELANEY, JR., M.D., Reporter.

MONTGOMERY—MARCH-APRIL

The March meeting was held at the Montgomery Hospital, Norristown, on the 2d. Dr. A. M. Ornsteen, of Philadelphia, gave a lecture on "Epidemic Encephalitis." Two reels of pictures were used to illustrate the various phases of this disease.

The April meeting was held at the same place on the 6th, with the largest attendance in the history of the Society. Dr. A. C. Morgan, president-elect of the State Society, was present, and spoke on "Heart Tragedies." He also gave an interesting résumé of recent legislation affecting the profession. After the refreshments, there was a meeting of hospital and county authorities to consult regarding the establishment of a county contagious-disease hospital. Details will be given later. W. W. DILL, M.D., Reporter.

PHILADELPHIA

April 13, 1927

Franklin Spencer Edmonds, Esq., Chairman Tax Commission: Taxation, with Special Application to the Physician.—Of every three dollars paid in taxes, one dollar goes for highways, one for schools, one-half for the care of defectives, dependents, and welfare institutions, and one-half to the actual running of the Government.

Twelve states tax income in addition to the income tax imposed by the Federal Government. Land pays more taxes than any other taxable source. Estates are taxed by both Federal and State Governments. Hence we repeatedly find two governmental authorities taxing the same thing, an evil which constitutes the most important single step to be worked out in taxation, calling for some single agency to work out a normal basis for taxation for both Governments. The taxing problem

is so interrelated that the country must be considered as a whole, so that the sources of income will not overlap. An estate may be taxable by the Federal Government, by the State Government, and by several other state governments as well if there are in the estate securities taxable in those states. While a state inheritance tax is fair, the estate should not be taxed out of existence and to avoid this Pennsylvania, in 1925, passed a reciprocity statute whereby this State will not tax stocks and bonds of nonresident decedents if the states in which the decedents lived will not tax Pennsylvanians. Many states have since passed similar measures.

There are only five states other than Pennsylvania that directly contribute money toward welfare institutions, and before the allotment was placed upon a per-diem cost per indigent patient, the hospital-appropriation bill occasioned a wild scramble.

The tax commission, with reference to taxation of welfare institutions, has studied the situation carefully for three years. Exempted realty is increasing far out of proportion to the taxable realty in certain districts. In twelve taxing districts in Pennsylvania, there is from 50 to 85 per cent of nontaxable realty, throwing upon a small percentage of the community the burden of supporting highways, schools, and government. Welfare institutions are apt to bunch in a locality and burden the community. The Tax Commission, therefore, suggests that since only three fourths of the state land is taxable, welfare institutions and churches should pay tax upon the land value, the improvement being exempt. This would be done only after an adequate notice of about ten years, so that refinancing could be arranged.

Jay F. Schamberg, M.D.: Newer Developments in the Treatment of Syphilis.—The golden period of opportunity in the treatment of syphilis comes in the earliest stage, when the diagnosis is made by the dark field and before the Wassermann is positive. Cures can be obtained in 90 per cent of these cases with appropriate treatment, though if the irreducible minimum of treatment is not given, it may prove to have been but abortive. No matter when seen, treatment should be given thoroughly and a second course insisted upon.

The Wassermann test is subject to some error, a negative test not being absolute proof of freedom from the disease, since two per cent of secondary syphilis and a higher percentage of tertiary syphilis will give a negative test. Under our present improved technic, false positives should be rare. Despite the most approved methods of treatment, syphilis may go on to attack the nervous system, and some irreducible Wassermanns occur which will not yield to treatment. These cases call for an x-ray of the chest for evidence of aortitis or cardiac involvement, and a spinal-fluid examination.

In treating syphilis we must distinguish between the goal in the acute and in the late stages. When acute, the desideratum is rapid destruction of the spirochetes and eradication of the disease. When late, the aim is improvement of the physical condition and elimination of the presenting symptoms, since the organs have been permanently changed and the constitution damaged. Minimal treatment in these latter cases is best. No matter what remedy is used, it should be given in small, repeated doses, and there should be rotation of remedies. An attempt to get a negative Wassermann in old cases may lead to termination of the patient's life.

With the introduction of bismuth we acquired a remedy, the toxicity of which is less than that of mercury, the spirochetal action of which is greater, and the intramuscular injections of which are less painful. Bismuth is valuable in early and late cases, and in congenital syphilis it will produce a high percentage of Wassermann reversals. Treatment should be given over the whole first year and in courses through the second. Better too much than insufficient treatment, and a spinal-fluid test is advisable before the patient is dismissed. While 606 is used by some in conjunction with mercury, the tendency now is to use neoarsphenamin because of the simplicity of administration and freedom from reactions. The best drug to use in combination with neoarsphenamin is bismuth, as follows: 100 mgm. potassium tartrobismuthate, followed in three days by 0.4 gm. neoarsphenamin. The second week, similarly, 100 mgm. potassium tartrobismuthate and 0.5 gm. neoarsphenamin. The third week, similarly, 100 mgm. potassium tartrobismuthate and 0.6 gm. neoarsphenamin. This should be repeated from the 3d to the 8th week, at which time the neoarsphenamin is stopped. The bismuth is continued for a total of 20 weeks.

At the end of this series of treatments a spinal-fluid Wassermann should be made, and if strongly positive, then more vigorous treatment is indicated. After one month's rest a Wassermann test should be made and a second course begun.

In cases of cerebrospinal syphilis, with patients who, despite all medication, show a positive spinal fluid, the question arises what to do? Malarial inoculations have been found beneficial in the following degree: one third of the cases of paresis treated with malaria inoculations are back at work with a complete remission of the disease; one third show a partial remission; one third are not affected. No other treatment ever gave so high a percentage of remissions or such maintained remissions. Many theories have been elaborated as to how this occurs. Does the malaria germ produce a reaction which destroys the spirochetes, or does the high temperature destroy it? Autopsies on cases so treated show an entirely different histologic picture of the brain—it is no longer a paretic brain, the spirochetes have disappeared. It has also been observed after pleuritis with high fever followed by death that no spirochetes could be demonstrated.

In the laboratory, if spirochetes are injected into the testicles of rabbits—which produces syphilis ordinarily in 100 per cent—and four days later the rabbits are put into baths at 112° F., which raises the body temperature 4°, and these baths are repeated for eleven days, the rabbits do not develop syphilis. Is this a stimulation of a defense mechanism or a direct action upon the spirochete? Spirochetes in a test tube, heated on a water bath, while they retain their motility, will not produce syphilis when injected. In one experiment, a chancre was produced on the testicle of a rabbit, and the animal given daily baths, as mentioned above for fifteen days. The chancre disappeared, and cure was effected, as proved by absence of the disease in the popliteal and inguinal glands. The controls were all positive. Gumma on the feet of rabbits also disappeared after hot baths. These experiments suggest that the spirochete is thermolabile, and the inoculations of malaria may bring beneficial effects through the increased temperature. From this it may be deduced also that hot baths (113° F), plus drugs in smaller than the usual dosage, may be of aid. Such baths have been used for many years in Japan and other countries for syphilis and leprosy, the water being used sometimes as high as 128° F.

In answer to questions asked by his audience, Dr. Schamberg said that bismuth by mouth, because of the insolubility of its salts, had not so much effect as when

administered intramuscularly; that the thermal springs of the country, in some of which high temperatures must be employed, have always attracted syphilitics; that anything which improves the general condition of the patient is auxiliary to specific treatment; that mercury may be given in three ways—(1) by intramuscular injections of the insoluble gray oil, salicylate, or calomel, (2) intravenously, as the succinamid or chlorid, and (3) by inunctions, which are dirty and not often thoroughly carried out by the patient; that preparations of bismuth should not be incorporated in a paraffin oil; and that hot water must not be used with neoarsphenamin.

Mary A. Hipple, M.D., Reporter.

WARREN—APRIL

The meeting was held at the State Hospital, Warren, April 21, with a large delegation from Erie County in attendance in addition to our own members. The program was in charge of Dr. H. W. Mitchell, Superintendent of the Hospital, whose talk dealt mainly with a description of the types of schizophrenia, or what was formerly called dementia præcox. His talk was illustrated by case examples.

Dr. H. K. Petrey gave a résumé of the theories of Freud and the application of psycho-analysis to mental diseases. Dr. I. A. Darling showed three cases of undoubted neurosyphilis, all of several years' standing, in which the syphilis had apparently been cured but mental symptoms of the schizophrenic type persisted, and in which it can be assumed that the syphilis was not the cause, but rather a complication of the insanity.

Three brains were shown, two with massive tumors, and one with an abscess of otitic origin occurring in a melancholic patient.

Miss Eckman, the dietitian of the Hospital, explained the iron diet which has been found useful in pernicious anemia, and showed sample diets of liver and heart prepared in various ways to make them palatable.

A buffet luncheon preceded the meeting.

M. V. Ball, M.D., Reporter.

YORK—MAY

The May meeting was held on the 5th in the Professional Building, Dr. E. S. Stambaugh, the president, in the chair.

Dr. W. P. Brown, of Philadelphia, addressed the society on "Treatment of Tuberculosis." He stated that in the last twenty-five years tuberculosis has shown a marked decline, but still the death rate was the highest for the active period of life, from 20 to 40 years. In Pennsylvania last year 7,200 deaths and in York County 100 deaths were due to tuberculosis. In a recent survey in New York it was found that for every death there exists five active cases, which means that in York County alone there must exist 500 active cases. Since the disease is so common, it should be constantly looked for and any of the following symptoms should be carefully investigated: chronic cough, hemoptysis, amenorrhea, gastric distress, pleurisy, recurrent hoarseness, rapid pulse, and marked debility. Every contact should be considered tuberculous until proven otherwise.

In the treatment, the public-health nurse should be utilized and will prove very valuable. A thorough rest cure should first be tried, and if the disease is not controlled and if localized to one lung, a pneumothorax should be performed. Sanatorium care is always to be preferred, but only 10 per cent of the active cases in Pennsylvania can be accommodated in the State sanatoria. After all symptoms have subsided, very careful graduated exercises should be instituted. Sun baths and the ultraviolet rays are of some value, but the exact amount is undetermined and may be harmful in advanced cases. The effect of climate or altitude is of little consequence. In a word, the most essential factor in the treatment of tuberculosis is rest.

In the discussion by Drs. G. E. Holtzapple, Charles Rea, A. A. Long, and W. F. Gemmill, the danger of the ultraviolet ray and the need for rest were further emphasized. Milton H. Cohen, M.D., Reporter.

The Woman's Auxiliary of the Medical Society of the State of Pennsylvania

Mrs. Samuel Bolton, *Editor*
4701 Leiper Street, Philadelphia, Pa.

COUNTY AUXILIARY REPORTS

ALLEGHENY

The regular spring meeting was held in the Blue Room of the William Penn Hotel, March 22d. The business meeting at 1:30 p.m. was followed by a talk and musicale at 2 p.m.

Dr. A. H. Colwell gave a most interesting and instructive talk on "The Causes of Heart Disease and Measures for its Prevention," dwelling particularly on heart disease in children produced by infected tonsils and such diseases as scarlet fever, chorea, and rheumatic fever.

"The Snow Storm" by Rogers and "Ashes of Roses" by Harvey Gaul were sung by a quartette composed of Mrs. Herbert E. Woelfel, Mrs. B. Z. Cashman, Mrs. R. J. Behan, and Mrs. Carl J. Scheffer, accompanied by Mrs. George McKee.

Mrs. J. LeRoy Foster, violinist, accompanied by Miss Janet Marshall, was heard to advantage in "Ave Maria" by Bach-Gounod and a one-act play, "Memories," arranged by Burke. The Chopin Scherzo played by Mrs. Charles H. Henninger was enthusiastically encored. The quartette concluded the program with "De Sandman" by Protheroe, and "Indian Dawn" by Zameznik.

The musical was followed by a Pastel Tea. Mrs. Joseph V. Grahek, chairman of the Hospitality Committee, assisted by Mrs. Arthur H. Gross, Mrs. Charles J. Eicher, Mrs. W. J. Connelly, Mrs. C. C. Wholey, Mrs. T. M. Stahlman, Mrs. J. M. Wilson, Mrs. W. H. Thompson, and Mrs. C. W. Wirts, members of the committee, were the hostesses. The tea-table centerpiece was composed of fifty candles in the pastel shades, imbedded in asparagus and maidenhair fern. All other appointments were carried out in the same shades. Mrs. Joseph Gold and Mrs. Theodore Baker presided at the tea table. One hundred and twenty-five members were present.

The annual meeting will be held on May 24th in the William Penn Hotel. The business meeting with all committee reports and election of officers will be followed by a luncheon at 1 p.m., followed by a program at 2 p.m.

Mrs. John F. McCullough.

CHESTER

The regular meeting of the Auxiliary was held at the home of Mrs. I. P. P. Hollingsworth, April 28th, and proved to be the most interesting of any yet held by

that organization. The president, Mrs. Thomas G. Aiken, presided. The minutes of the former meeting were read by the secretary, Mrs. O. J. Klevan. Mrs. U. Grant Gifford, treasurer, reported a substantial balance on hand.

Mrs. Howard Mellor, chairman of the Health and Welfare Committee, gave an interesting talk on the helpful activities of the various organizations throughout the country, particularly stressing Child Health Day. She told of the expected arrival here during the month of May of a traveling clinic, under State auspices, to establish health clinics in places where there are none at present. The clinics aim to correct defects in children that have been neglected by their parents. These clinics are for diagnosis only. They do not treat any cases, but refer their findings and recommendations to the local physicians for action. Mrs. Mellor also referred to the expected visit here of Mrs. MacCauley, Secretary of Welfare of the State Department of Health.

As reported by Mrs. Farrell for the Publicity Committee, the prizes offered by the A. M. A. Auxiliary for health essays will be awarded in a few days. The children throughout the country merit real commendation for their efforts. Some very excellent papers were submitted.

Mrs. Joseph Scattergood gave a most interesting and instructive talk on the activities of the last Legislature along health and medical lines. Mrs. Scattergood spent several days at Harrisburg and learned much of value to the Auxiliary.

After adjournment of the meeting the hostess served refreshments.

MRS. JOHN FARRELL.

FAYETTE

The Woman's Auxiliary of the Fayette County Medical Society closed its second year of organization at its annual meeting on April 5th with an enrollment of fifty active and six honorary members. The reports of all the officers and committees were most satisfactory and showed progress in each. Seven regular meetings were held during the year, with an average attendance of nineteen. One public meeting was held with approximately 300 present. As this was our first venture of the kind, the Auxiliary was much pleased and gratified with the result.

At one meeting we were honored by a visit from Mrs. W. Wayne Babcock (State Organization Chairman), who gave a most illuminating talk on the "ins" and "outs" of the organization. Mrs. Babcock's address was an inspiration which paved the way for the year's work, and consequently made the President's task much easier.

Fine educational talks were given during the year by persons of ability, which were much appreciated and enjoyed. These speakers were as follows: Dr. H. A. Heise gave a splendid address on "Infection and Immunity." Miss Marshall, Executive Secretary of Pennsylvania's Society for Crippled Children, told us of the wonderful work being done throughout the State for crippled children and the great need for work yet to be done. Dr. George J. Wright, of Pittsburgh, addressed the Auxiliary on "Neurology" at our guest meeting. Dr. W. P. Brown, of the Pennsylvania Tuberculosis Society talked to us on the subject of his work. Dr. J. S. Hackney's address on diabetes was delivered at the January meeting. Dr. Elliott B. Edie's subject was "Periodic Health Examinations." Dr. Chi, of our local hospital, gave an interesting talk on the "Present Conditions in China." At the public meeting in March, Dr. W. G. Turnbull, Deputy Secretary of Health of Pennsylvania, delivered an inspiring address on "Tuberculosis."

Our organization had one social meeting during the year, which was a dinner with our husbands as honor guests.

The special work of our Auxiliary, so far, has been to help the tuberculous victims of the County, and it is our hope to do much more as conditions develop. A summer outing of one day was given to about ninety children, all of whom came from afflicted families. The Auxiliary felt well repaid, as a most happy day was spent by the unfortunate tots. At Christmas time useful articles, such as sweaters, robes, hose, etc., as well as some toys, were sent to tuberculous children at Cresson, and others in the County, about $125 being spent for this very worthy cause. This was done through the efficient efforts and coöperation of the health committee composed of Mrs. Crow, Mrs. Robinson, and Mrs. Johnson. Our Christmas-Seal sale amounted to approximately $300 and one $10 Health Bond was bought.

The number of subscriptions to *Hygeia* has increased substantially through Mrs. Nixon's untiring efforts, even if we did not reach the goal.

Our Auxiliary took an active part in the profession's legislative activities at Harrisburg through Dr. H. J. Bell, our State Senator. Mrs. H. J. Byron was chairman of this committee.

We have made quite an effort to promote periodic health examinations and the roll call from the campaign has been encouraging. Delegates were sent to the State meeting held in Philadelphia in October, and Mrs. Heise brought back a comprehensive report. At this meeting our president, Mrs. Charles H. Smith, was elected first vice-president of the State organization.

At our annual meeting held this April, the following new officers were elected: president, Mrs. A. E. Crow; 2d vice-pres., Mrs. W. J. Bailey; recording secretary, Mrs. H. J. Nixon. The other officers are: 1st vice-pres., Mrs. H. J. Bell; corresponding secretary, Mrs. D. E. Lowe; and treasurer, Mrs. G. O. Evans.

Mrs. Smith, the retiring President, presented the Auxiliary with a gavel made from wood from our first local hospital at this meeting.

MRS. J. G. HEMINGTON,
Chairman of Press Committee.

BABY SHOULD SPEND HIS VACATION SAFE AT HOME

The kind of vacation that we should take depends on the kind of vocation we follow, thinks Dr. Wilbur F. Thomson, writing in *Hygeia* for June. To the mountaineer all mountains are monotonous while he who lives by the sea has no illusions about what the "sad sea waves are saying."

A journey on one of the de luxe special trains or a cruise on a palatial steamer, far from business and household cares, might be an ideal vacation for the tired business man and housewife, but few of them ever get farther than the family flivver will take them.

The baby, however, should never be exposed to the perils of vacationing, declares Dr. Thomson. Home is the safety zone for babies. Even if the food and water supply are pure, the mere change from one supply to another is enough to upset the child badly, and he is not able to withstand exposure to the various diseases with which he may come in contact when away from home.

THE

MEDICAL SOCIETY OF DELAWARE

OCULAR FIELDS IN SYPHILIS*

WILLIAM F. BONNER, M.D.
WILMINGTON, DEL.

As this subject is too broad for one paper, only the relationship of antiluetic treatment and ocular fields will be discussed: (1) The effect of two types of treatment on simple optic atrophy in syphilis. (2) The effect of treatment on tabetic optic atrophy. (3) Intracranial conditions provoked by antisyphilitic treatment.

CASE 1 was referred for refraction, because of a migraine-like headache which caused a fortification spectrum when it was severe. Although only 32, the patient required two pairs of glasses. Her fields of vision were very constricted. A blood Wassermann was done, which was three-plus . As this patient was very fleshy and the veins were hard to locate, it was necessary to use intramuscular injections of salicylate of mercury. At times the progress was very slow, but at the end of eight months, the fields of vision had improved markedly, the distance glasses could be worn for near vision, and the migraine-like headaches had disappeared.

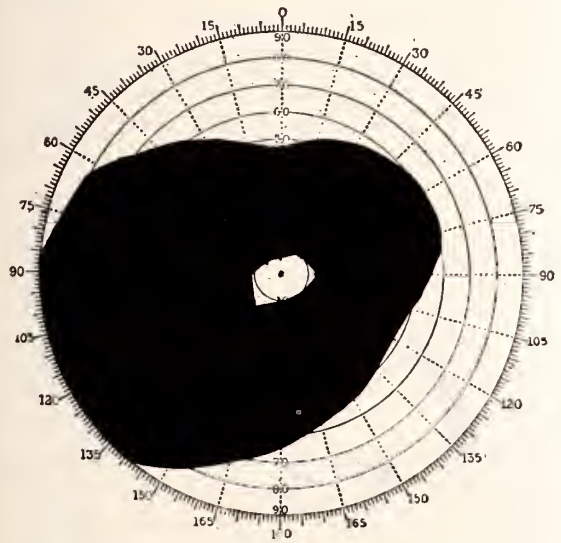


Fig. 1. Perimeter chart in case 1. Left eye before treatment.

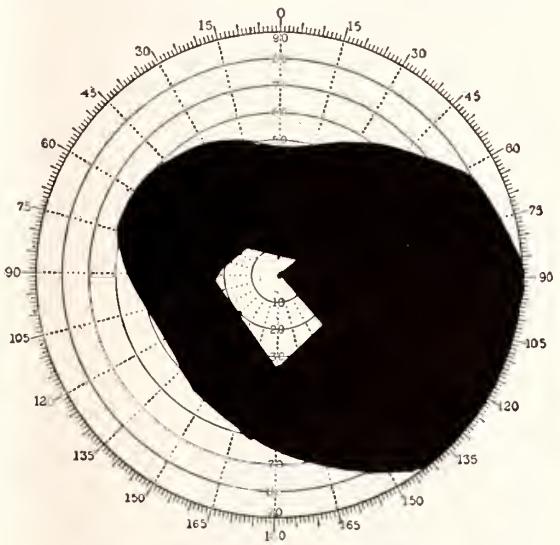


Fig. 2. Perimeter chart in case 1. Right eye before treatment.

CASE 2 came to the eye clinic at the Delaware Hospital, because of very poor vision, which was improved only slightly by refraction. The fields of vision were very small. The blood Wassermann was four-plus. The patient was referred to the genito-urinary clinic for routine treatment, and has been showing improvement.

CASE 3 was referred by Dr. J. J. Jones because of an Argyll Robertson pupillary reaction. The fields of vision showed a binasal hemianopsia. The blood Wassermann was negative. An attempt was made to obtain spinal fluid, but was unsuccessful. Antisyphilitic treatment was used notwithstanding, and there was a decided improvement in the fields of vision and some improvement in the Argyll Robertson pupillary reaction. Two years later, the fields were plotted and showed a decided shrinking, indicating the necessity of further treatment.

CASE 4 came because of headaches and double vision. Examination showed paralysis of the oculomotor nerve in both eyes, Argyll Robertson pupillary reaction in both eyes, and a moderate constriction of both ocular fields of vision. When the patient was sent for a blood Wassermann he objected strenuously, as he said that he had had the test done eighteen times and that it was always negative. This report came back negative. The patient was taken to Dr. Patten for a neurologic examination, and he made a diagnosis of tabes dorsalis, and recommended a spinal-fluid examination, which showed a four-plus Wassermann. The second fields showed a marked improvement, caused by the spinal drainage in obtaining the fluid for examination. One cause in the delay of tabetic symptoms in this case was two infections by malaria.

In tabes the three eye symptoms usually seen are constriction of the ocular fields, oculomotor

*Read before the Medical Society of Delaware, Dover, October 12, 1926.

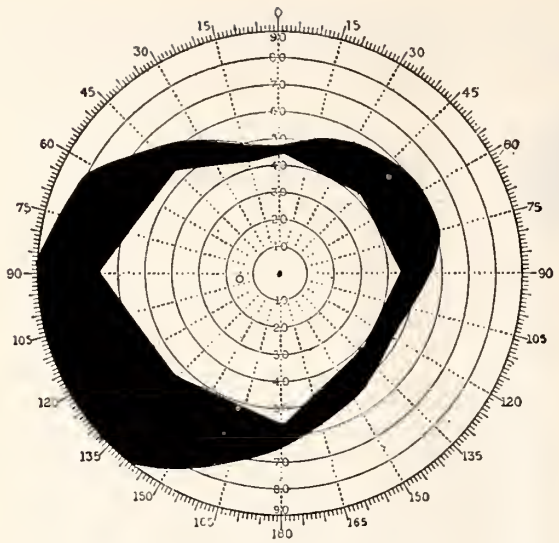


Fig. 3. Perimeter chart in case 1. Left eye after treatment.

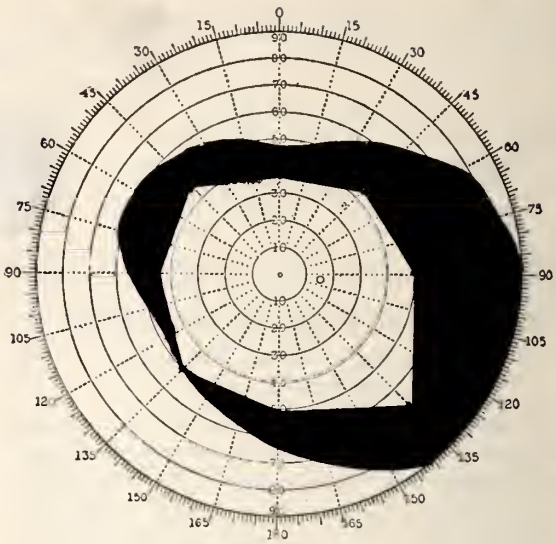


Fig. 4. Perimeter chart in case 1. Right eye after treatment.

paralysis, and Argyll Robertson pupillary reaction. The change in the ocular fields is the most common symptom, occurring in combination with either of the other two, or all three occurring at the same time. The fields are the quickest to show the effect of treatment, the oculomotor paralysis next, and the Argyll Robertson pupillary reactions are the most stubborn.

Occasionally intracranial lesions arise while the patient is undergoing antisyphilitic treatment. In case 4 there was a paracentral scotoma for green when first examined. After treatment this shrank markedly, but a peripheral scotoma developed in another spot. Whether there was any significance in this or not I do not know, but this patient developed a severe arsenical dermatitis. After this cleared up the scotomas for green disappeared.

A case was referred by Dr. Washburn, because of sudden loss of vision in the left eye. This patient was having antisyphilitic treatment. Examination of the fundus showed a choked disk in the left eye. The chart of the field of vision was normal except for a central scotoma. A routine Bárány test showed a destruction of the eighth nerve on the right side. The treatment was pushed and the choked disk cleared up.

Conclusions

(1) Simple syphilitic optic atrophy is benefited by any type of antisyphilitic treatment.

(2) In tabes the fields of vision are very easily influenced by treatment or the lack of it.

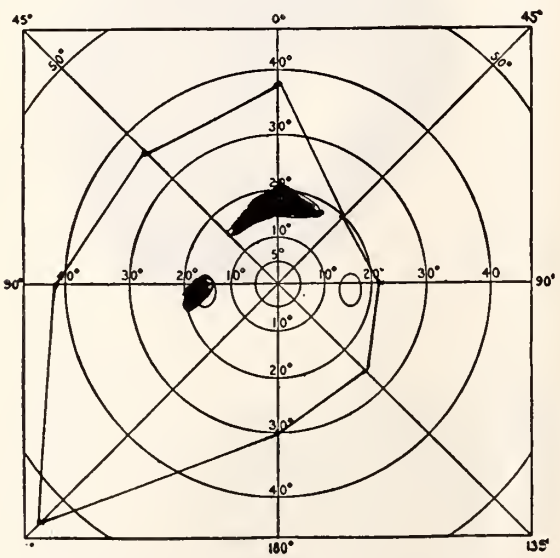


Fig. 5. Left visual field in case 4, before treatment.

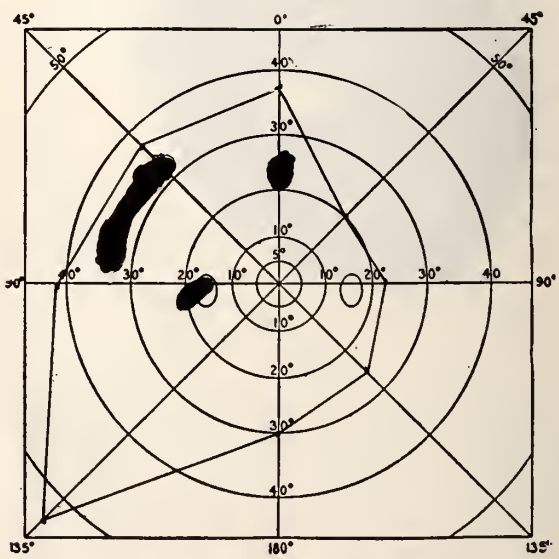


Fig. 6. Left visual field in case 4, after treatment.

(3) If in the treatment of syphilis other intracranial conditions are provoked, do not be discouraged; push the treatment.

ABSTRACT OF DISCUSSION

E. R. Mayerberg, M.D. (Wilmington, Del.): Oftentimes serious consequences are avoided by perimetric examination to determine the contraction of the visual fields. This may be an early symptom in a number of conditions. When there is a suspicion of contraction, the patient should be kept under observation, and should also be subjected to a thorough physical examination, including Wassermann and urinary tests.

The use of the perimeter is not an exact science, and is one of the most unreliable of all the tests used in ocular work. Repeated examinations often show wide variations. In such cases, of course, it should be disregarded entirely. However, if practically the same results are secured upon repeated examination, it then becomes of great value.

A patient with a contracted field or a scotoma does not necessarily have syphilis. These conditions often occur in patients who do not have the disease either inherited or acquired. It is not unusual to find girls in the adolescent stage developing sudden loss or great impairment of vision. Most of them will give a negative blood test, and yet will show a scotoma with a pronounced contraction of the fields, an effusion into the retina, edema of the disk, and often in the later stages areas of pigmentation as well as areas of atrophy. These cases are usually due to circulatory changes, such as thrombosis or embolism of the central retinal vessels. The prognosis is usually good. Rest in bed, the use of the bromids and iodids, and time usually bring about a complete recovery.

In any proven case of syphilis with ocular symptoms, intensive treatment should be instituted at once. In case of a negative blood Wassermann, a spinal-fluid test should be made also. Frequently this will be strongly positive, and will indicate antisyphilitic treatment.

B. S. Vallett, M.D. (Wilmington, Del.): Arsenic should not be administered, in these cases, to the exclusion of other agents. We have been in the habit of making ten injections of arsenic, but find that patients will often return with a two-plus or even a four-plus Wassermann. In the future we intend to give some mercury very shortly after two or three arsenical injections.

W. O. LaMotte, M.D. (Wilmington, Del.): While, if the blood is negative, it is important to make a spinal-fluid Wassermann test, it must not be forgotten that other causes can produce field contractions. Even though the Wassermann is positive, some other cause, such as posterior sinus involvement, may be producing the eye condition.

J. A. Ellegood, M.D. (Wilmington, Del.): There are so many conditions of a circulatory or intracranial character which can cause scotoma that I do not consider this symptom positive proof of the presence of syphilis.

John Palmer, M.D. (Wilmington, Del.): No matter what the cause of these conditions may be, the treatment, at least, is antisyphilitic, and should be started primarily.

Dr. Bonner (in closing): Neither blood Wassermann nor spinal-fluid Wassermann can always be depended upon. I have known both tests to be reported negative, but a second blood Wassermann was four-plus. While there are a number of other causes for this condition, when there is a contraction of the visual fields the patient should be tested for syphilis unless there are positive symptoms of some other condition.

A CORRECTION

In the April number of the Journal, appeared an editorial on "Sterilization of the Insane and Feeble-minded," in which a quotation was given from the public press to the effect that Dr. M. A. Tarumianz, Superintendent of the Delaware State Hospital, had stated that the sterilization law of Delaware eventually will rid the State of all insane and feeble-minded persons. Dr. Tarumianz calls attention to being improperly quoted, which places him in an unjust and embarrassing position. On the contrary, he is of the opinion that "it is highly improbable that sterilization will abolish all the insanity and feeble-mindedness, for it is well known that certain psychoses are specific and not functional in character," and further that "we must face the fact that the nation is being poisoned by the rapid production of mental and moral defectives, and to insure the survival of the fittest we have to abrogate such defectives of all power to procreate. Undoubtedly this is a most beneficent State law."

At the Delaware State Hospital "three physicians make the final decision on each individual as to whether or not he or she should be desexualized. One of these is an experienced alienist, another a surgeon, and the other the superintendent of the institution in which the patients are being held."

We are very glad to place before our readers the real opinion of Dr. Tarumianz on this most deplorable condition.

COUNTY SOCIETY REPORT

NEW CASTLE—MARCH-APRIL

The March meeting was held in the University Club rooms at Wilmington, with the president, Dr. Charles P. White in the chair.

Dr. Joseph Sailer, of Philadelphia, delivered an address on "Leukemia." The following case reports were presented: "Multiple Sclerosis" by Dr. Boro; "Three Surgical Cases in Infants" by Dr. Speer; "Two Cases of Mistaken Surgical Diagnosis" by Dr. J. Pierson; "Three Cases of Wrist Drop in Children, Cause Undetermined" by Dr. A. Strikol.

The Legislative Committee reported a poor outlook for the doctors' liquor bill. The Society went on record for repeal of both the Klair Law and the Loose Law. A motion by Dr. George Vaughn was approved that "each and every member of the House and Senate receive a letter stating that our Society heartily endorses the repeal of the Klair and Loose Laws." A motion by Dr. William Marshall was approved that the secretaries of both the Kent and Sussex County Medical Societies be notified of the action of our Society, with the suggestion that they request their legislative representatives to support this measure.

Dr. John Palmer, having completed his forty-fifth year in the practice of medicine, was given a hearty ovation by his fellow members. He responded by a short talk in which he told a few anecdotes of his medical-college days. It was plain to be seen that he was still young in spirit, and he confirmed our observation by saying that he was good for quite a number of years yet.

The meeting held on April 19th was called to order

by the president, Dr. Charles P. White. On motion of Dr. McElfatrick, the minutes of the previous meeting were not read.

Dr. P. W. Tomlinson introduced the speaker of the evening, Dr. Orlando H. Petty, of Philadelphia, who gave a short but thorough talk on the "Treatment of the Emergencies of Diabetes." The following points were stressed by Dr. Petty: diabetes does not show glycosuria in 33 per cent of cases; diabetes may be diagnosed and treated by chemistry alone; in treatment, first master the diet, and then resort to insulin if necessary. The paper was discussed by Drs. H. W. Briggs and Olin S. Allen.

Mr. Hogan spoke in the interest of the Delaware Automobile Association, and Mr. Ballantyne in the interest of the Delaware Motor Club. Dr. Strikol moved that these matters be referred to a special committee. Dr. White appointed Dr. Bastian as chairman and Drs. Parsons and Strikol as the other two members of this committee.

It was moved and seconded that the report of the censors be accepted regarding the application to membership of prospective members who had not practiced in the county a year. The motion was carried.

Following adjournment refreshments were served.

BRICE SEWELL VALLETT, M.D., *Secretary.*

Medical News

Deaths

CHARLES L. KENYON, M.D., of Monroeton; Jefferson Medical College, 1894; aged 63; recently.

MRS. ADELAIDE GROFF, widow of the late Dr. James E. Groff, of Doylestown; aged 69; April 13.

WILLIAM SAMUELI, M.D., of Philadelphia; Temple University Department of Medicine, 1912; aged 49; recently.

DAVID A. PATTERSON, M.D., of Westfield; Rush Medical College, Chicago, Ill., 1897; aged 59; April 6.

THOMAS A. DOWNS, M.D., of Philadelphia; University of Pennsylvania School of Medicine, 1864; aged 91; recently.

E. TILLSON WARD, M.D., of Philadelphia; University of Pennsylvania School of Medicine, 1886; aged 62; April 20.

JOSEPH V. KLOCK, M.D., of Mahanoy City; Hahnemann Medical College and Hospital of Philadelphia, 1895; aged 53; April 25.

KARL A. EMMERLING, M.D., of Pittsburgh; Jefferson Medical College, 1890; aged 59; May 6, while convalescing from pneumonia.

FRANK E. MCELREE, M.D., of Greenville; Western Reserve University School of Medicine, Cleveland, Ohio, 1909; aged 47; April 29.

BENJAMIN FLEMING, M.D., of Philadelphia; Hahnemann Medical College and Hospital of Philadelphia, 1904; aged 56; April 24, of nephritis.

LEON SADOWSKI, M.D., of Pittsburgh; Detroit College of Medicine and Surgery, Michigan, 1891; born in Poland in 1869; April 12, of pneumonia.

ROBERT H. MCCARTY, JR., M.D., of Philadelphia; Hahnemann Medical College and Hospital of Philadelphia, 1897; aged 56; April 1, of heart disease.

ELLIS L. GOODALL, M.D., of Pottsville; George Washington University Medical School, Washington, D. C., 1897; aged 52; April 16, at Bennington, Vt., of pleurisy.

J. ERNEST SCOTT, M.D., of Altoona; University of Pennsylvania School of Medicine, 1890; practiced at New Hope until 1921; aged 70; April 2, at Sebring, Fla.

VIRGIL H. LILLY, M.D., of McSherrystown; University of Maryland School of Medicine, Baltimore, 1869; formerly justice of the peace; aged 81; in April from injuries received in a fall.

C. C. COCKLIN, M.D., of Harrisburg; University of Pennsylvania School of Medicine, 1894; eye specialist for many years; vice-president of the Harrisburg Academy of Medicine; aged 65; May 7, of pneumonia.

SAMUEL E. MOWERY, M.D., of Mechanicsburg; University of Pennsylvania School of Medicine, 1895; former president of the Cumberland County Medical Society; member of the Harrisburg Academy of Medicine; aged 65; May 1.

MORTON P. DICKESON, M.D., of Media; Philadelphia College of Pharmacy, 1886; Medico-Chirurgical College of Philadelphia, 1888; son of the late Dr. William T. W. Dickeson of Delaware County; served nine years as a member of the State Board of Health before it was dissolved; president of the Delaware County Symphony Orchestra; aged 62; May 9, in the National Stomach Hospital, Philadelphia, of general sarcomatosis.

HENRY I. DORR, M.D., emeritus professor of anesthesia in the School of Dentistry of Temple University, Philadelphia, died at Winchester, Mass., where he has lived the past fifteen years, April 24, aged 82. Dr. Dorr recently created a $50,000 fund, under which the Temple School of Dentistry will receive the interest for dental research. He also a short time ago contributed $5,000 to the Greater Temple University campaign and transferred to it property in Kansas City valued at $2,500.

JOHN G. CLARK, M.D., of Philadelphia; University of Pennsylvania School of Medicine, 1891; appointed associate in gynecology at Johns Hopkins University in 1899, and in the same year was appointed professor of gynecology in the School of Medicine of the University of Pennsylvania and gynecologist-in-chief of the University Hospital; appointed to the William Goodell Chair of Gynecology at the University in 1922; president of the American Gynecological Society; member of the American College of Surgeons; chairman of the Gynecological and Obstetrical Section and Board of Public Instruction of the American Medical Association, and medical secretary of the Council of National Defense; aged 60; May 4, following a long illness.

FRANK W. WOODBURY, M.D., of Philadelphia; Jefferson Medical College, 1873, former secretary of the Commission on Lunacy of the State Board of Charities, and for many years professor of clinical medicine at the old Medico-Chi College; May 24, 1927. Death was due to apoplexy. Dr. Woodbury was made secretary of the Commission on Lunacy in 1910 and when the Board of Public Charities was converted into the Department of Welfare he became chief of the Mental Bureau of that Department, retiring in 1920. With Dr. R. J. Dunglison he originated and edited the *College and Clinical Record*, became assistant editor and subsequently editor-in-chief of the *Philadelphia Medical Times*, and was likewise a member of the editorial staff of the *Journal of the American Medical Association*, the *Boston Medical and Surgical Journal*, and the *New York Medical Journal*. He was secretary of the section on therapeutics of the Ninth International Medical Congress held in Washington in 1887.

Births

TO DR. AND MRS. STUART MUDD, of Villanova, a son, April 29.

To DR. AND MRS. RAYMOND D. TICE, of Quakertown, a daughter, Mary Eleanor.

To DR. AND MRS. J. L. BOND, of Tamaqua, a daughter, Eleanor Louise, May 5.

To DR. AND MRS. WILLIAM JOHN RYAN, of Philadelphia, a son, Andrew Ronon, April 4.

To DR. AND MRS. HARVEY R. BAUMAN, Champa, India, a daughter, Clara Ann, April 5.

To DR. AND MRS. HAROLD J. MCLAREN, of New Brighton, a son, Harold Johnson, Jr., April 23.

Engagements

MISS VIRGINIA REDMAN, daughter of Dr. and Mrs. John L. Redman, of Philadelphia, and Mr. Samuel Godfrey Shepherd, of Overbrook.

MISS MABEL BAYARD KANE, daughter of Dr. and Mrs. Bayard Kane, of West Chester, and Mr. Joseph Mickle Fox, Jr., of Torresdale.

MISS JOSEPHINE GRANT HOOPER, of Chestnut Hill, and Mr. William Spencer Service, son of Dr. and Mrs. Charles A. Service, of Bala.

MISS AMORITA MURIEL SESINGER, daughter of Dr. and Mrs. Alexander H. Davisson, of Philadelphia, and Mr. Charles Edward Copeland, of New York.

MISS KATHERINE THOMAS DEAL, daughter of Dr. and Mrs. J. Colton Deal, of Philadelphia, and Mr. A. Balfour Brehman, also of Philadelphia. Their marriage will take place on June 18.

Marriages

MISS LONG, of Dauphin, to Dr. George L. Brown, of Fort Hunter, recently.

MISS RUTH HELD, of New York, to Dr. Abraham Allen Goldbloom, of Pittsburgh, at Berlin, Germany, April 10.

MISS MARGARET HAYES HAMILTON, Philadelphia, to Mr. George Boyd, son of Dr. and Mrs. George M. Boyd, of Philadelphia, April 20.

MISS MARY FLEMING HARE HALL, Philadelphia, to Mr. Courtland Yardley White, 3d, son of Dr. and Mrs. Courtland Yardley White, Jr., of Philadelphia, June 8.

Miscellaneous

DR. AND MRS. WILLIAM IRWIN, of Philadelphia, are making an extensive tour of Europe.

DR. DAVID I. MILLER, of Harrisburg, is convalescing after an operation for gall stones.

A $1,000,000 drive has been planned for the erection of a new Home for Incurables in Philadelphia.

DR. SAMUEL P. MENGEL, of Wilkes-Barre, is visiting European clinics, accompanied by Mrs. Mengel.

DR. J. NEWTON HUNSBERGER, of Norristown, recently fell from his horse, sustaining a fractured clavicle.

DR. ARTHUR E. CROW, of Uniontown, accompanied by Mrs. Crow and their son, are spending the summer in Europe.

DR. AND MRS. GEORGE E. RAIGUEL, of Philadelphia, and their daughter will sail the latter part of July for Europe.

A JOINT MEETING of the obstetrical societies of New York City and Philadelphia was held in Philadelphia, April 19.

THE EPISCOPAL HOSPITAL, Philadelphia, has inaugurated a campaign to raise $200,000 for a new dispensary building.

DR. AND MRS. HENRY S. PANCOAST, of Chestnut Hill, recently sailed for England, where they will spend several months.

DR. AND MRS. HOWARD F. HANSELL, of Philadelphia, recently sailed for Italy, where they will remain until September.

DR. AND MRS. EDWARD B. KRUMBHAAR, of Philadelphia, sailed recently for Europe, where they will travel until the autumn.

DR. WILSON S. ERDMAN, of Quakertown, was recently operated upon for strangulated hernia at the Sacred Heart Hospital, Allentown.

THE CHESTER COUNTY MEDICAL SOCIETY is making active preparations for a fitting celebration of their centennial anniversary in 1928.

DR. RICHARD G. BURNS has been appointed Director of the Department of Health of the City of Pittsburgh, succeeding Dr. Carey J. Vaux, who died recently.

GROUND WAS BROKEN May 20 for the new $73,000 nurses' home of the Frederick Douglass Memorial Hospital, Philadelphia. This hospital cares for colored patients.

GOVERNOR FISHER signed the Weingartner bill, limiting payment of commissioners on moneys collected for charitable purposes to 15 per cent of the amount collected.

THE FIRST ANNUAL reunion and dinner of the newly formed Wills Hospital Ex-Resident Association was held in Philadelphia, May 14. Dr. J. Milton Griscom was elected president.

DR. LUTHER C. PETER, of Philadelphia, was elected president of the American Laryngological, Rhinological and Otological Society at the annual meeting held at Atlantic City, May 26-28.

DR. HOWARD C. FRONTZ, of Huntingdon, has been elected president of the Pennsylvania Public Health Association to fill the unexpired term of the late Dr. Carey J. Vaux, of Pittsburgh.

TWELVE EMINENT SURGEONS, four of whom came from distant parts of the world, graduated recently from the clinic of Dr. Chevalier Jackson, inventor of the bronchoscope, Philadelphia.

DR. CHEVALIER JACKSON has presented the casket, gold medal, and scroll, constituting part of the Bok Award recently received by him, to the College of Physicians of Philadelphia, to be made part of the medical archives of Philadelphia.

DR. C. R. FLORY, of Nazareth, has purchased the property and equipment of the late Dr. Alfred E. Fretz, Sellersville, and will take possession July 1. At present he is the house physician at the General Hospital, Paterson, N. J.

DR. M. H. JACOBS, professor of physiology, University of Pennsylvania, delivered the seventh Harvey Society Lecture at the New York Academy of Medicine, May 7. His subject was "The Exchange of Materials Between the Erythrocyte and its Surroundings."

DR. B. FRANKLIN ROYER, of Philadelphia, medical director of the National Committee for the Prevention of Blindness, on April 26 presented a paper before the Louisiana State Medical Society in New Orleans on "The Relation of Venereal Disease to Vision Impairment."

ON MAY 12, the hospitals of Philadelphia threw their doors wide open to visitors in celebration of National Hospital Day. On this one day of the year, the anniversary of the birth of Florence Nightingale, citizens are invited to inspect the methods and activities of hospitals and allied institutions.

THE REGULAR MONTHLY meeting of the Erie County Medical Society was addressed on May 3 by Dr. C. C. Mechling, of Pittsburgh, on "Diagnosis of Acute Proctologic Diseases." The address was illustrated by lantern slides. Dr. Mechling also addressed the Armstrong County Medical Society on April 5, on "Colitis."

MRS. ANDREW C. BIEHN, wife of Dr. Biehn, Quakertown, who has been in a precarious condition at St. Luke's Hospital, Bethlehem, for several weeks is now reported to be improving. Mrs. Biehn fell down a stairs and was severely injured. The frontal bone, the nose, and a leg were broken, and several spinous processes of the cervical vertebræ were fractured.

A STRIKING PORTRAIT of Dr. Hobart Amory Hare, painted by William Thomson, was presented to Jefferson Medical College by the class of 1927. Dr. Hare is professor of therapeutics at the College. Portraits of Dr. Thomas McCrae and Dr. Albert P. Brubaker, by the same artist, were presented to the college in 1925, and in 1926 by the respective graduating classes.

THE ERECTION OF the first of the new buildings in the $2,000,000 construction plan of the Bryn Mawr Hospital, Bryn Mawr, was started May 5. The unit will be completed by November, 1928, and will provide on six floors places for 70 ward patients, 72 private patients, 22 children's beds, and a receiving department of 16 beds, together with ward and private pavilions.

DR. ELLEN C. POTTER, former Secretary of Welfare of Pennsylvania, has been appointed medical director of one of the most important State institutions in New Jersey, the new North Jersey Training School for Feeble-minded at Totowa, and will be a general consultant to the Department of State Institutions in its relations to public and private welfare institutions throughout that State.

THE AMERICAN ASSOCIATION OF INDUSTRIAL PHYSICIANS AND SURGEONS announces the establishment of a permanent office at 22 East Ontario St., Chicago, Ill., for the transaction of its affairs. The work will be carried on under the supervision of Dr. F. L. Rector. The office will study industrial health problems and work toward establishing a clearing house for information in this field.

THE TWELFTH ANNUAL convention of the Catholic Hospital Association of the United States and Canada will be held coincidently with the Hospital Clinical Congress of North America, which is to be held in Milwaukee, Wis., June 20-24. The congress will be the first attempt to institute a practical hospital and exposition of international proportions, demonstrating all departments of hospital work.

AT THE TWO-HUNDREDTH-ANNIVERSARY celebration of the American Philosophical Society, Philadelphia, April 28, Dr. Francis X. Dercum, emeritus professor of nervous and mental diseases, Jefferson Medical College, was elected president to succeed the late Charles D. Walcott, director of the Smithsonian Institution. In the history of this society fifteen of its members were signers of the Declaration of Independence, it is reported, eight were presidents of the United States, and seven received Nobel prizes.

THE PENNSYLVANIA CHILDREN'S COMMISSION has closed its headquarters in Philadelphia, as its appropriation bill was lost in the Legislature. Created in 1923 and continued by the next General Assembly, the Commission accomplished much work that will not be totally lost. Besides preparing a complete digest of all laws relating to child welfare, it made notable special studies, having been particularly authorized to recommend revision of statutes affecting dependent, defective, delinquent, neglected, incorrigible, and illegitimate children.

MANY SURGEONS AND physicians and more than 100 nurses assembled at the Pennsylvania Hospital, Philadelphia, the night of May 19, to recall their World War days and to honor the memory of several who have died. On May 19, 1917, among the first detachments of American medical units to leave New York was Base Hospital No. 10, composed largely of doctors and nurses from Pennsylvania and Jefferson Hospitals. Portraits of Dr. Richard Harte, organizer of the unit, and Dr. Robert G. Le Conte, both of whom died in 1925, were unveiled by Dr. John H. Gibbon.

GOVERNOR JOHN S. FISHER, on May 8, approved appropriations totaling $5,197,800 as State aid to 184 hospitals, including medical schools, in all parts of the State. The total approved is $366,700 less than the Legislature appropriated to these institutions, and is $649,700 more than Ex-Governor Pinchot allowed in hospital appropriations at the close of the 1925 session, and $1,469,400 more than Mr. Pinchot approved in 1923. The amounts apportioned vary from $2,500 granted to the Coudersport General Hospital to $175,000 granted to the Jefferson Medical College Hospital, Philadelphia.

JOSEPH WILLIAM DRISCOLL, 8 of Fairview, N. J., was the first of the 4,488 babies to be born in the Misericordia Hospital, Philadelphia, and was given a loving cup on May 12 when 500 of the children returned for a reunion. Marie Therese Burke is only eight weeks old and did not get a cup, but she got a lot of attention because her father, Dr. Alex Burke, was the first resident male physician at the hospital and her mother was the first woman doctor on the staff. A cup was also given to Mrs. Catherine Mitchell, of Collingswood, N. J., because her six children were born at Misericordia.

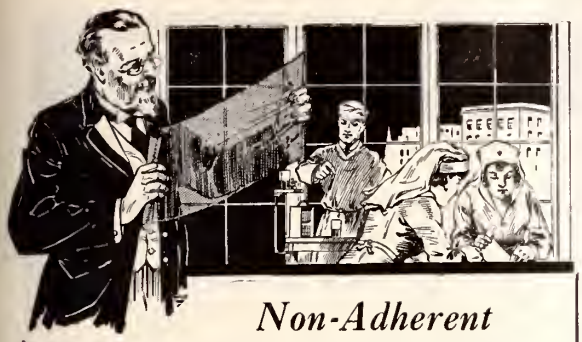
THE SURGICAL SUPPLY house of A. S. Aloe Company in St. Louis has been crowded out of their contracted quarters at 513 Olive Street (the optical store remains there), and are now located in the new Aloe Surgical Building at 1819-23 Olive Street—only three blocks from the Union Station. The removal was necessitated by lack of downtown parking facilities and the growth of their business. Visiting physicians should take note of the new location near the railway center. The Company is now patronizing the advertising pages of the JOURNAL and will be glad to send their catalogue to any physician desiring the same.

DR. ISIDORE S. RAVDIN, assistant professor of research surgery of the University of Pennsylvania, has been granted a leave of absence to do physiological research work in Edinburgh. Dr. William S. Seifriz, professor of botany, has also been given a four-months' leave of absence. He has been conducting experiments in the measurement of the elasticity of human tissue, and will go first to the colloid Chemical Institute in Vienna, where he will do research work on albumins. Later he will attend the meetings of the departments of botany and physiology of the Universities of Leningrad and Moscow, and will discuss microdissection before the International Congress of Zoölogy, which will meet in Budapest.

JEFFERSON MEDICAL COLLEGE and Hospital, of Philadelphia, with a record of 102 years of public service, has begun a campaign for $1,500,000 with which to erect a twelve-story college building on Walnut Street. Announcement of the drive was made at a luncheon in the Benjamin Franklin Hotel recently, which was attended by officials, alumni, and several hundred other prominent men and women. Alba B. Johnson, president of the Board of Trustees, outlined the needs of Jefferson and how the funds obtained would be expended, after which he presented Dr. W. W. Keen, emeritus professor of surgery at the College, as the next speaker. Mr. James M. Wilcox, president of the Philadelphia Savings Fund Society, is directing the campaign, which began June 6.

WHEN DR. J. EWING MEARS, of Philadelphia, died in 1919, his will provided for a $60,000 trust fund, the income to be paid to his sister during her life time. At her death the fund was to be turned over to "the president and fellows of Harvard College." The sister died in 1924, and the trustees of the estate then

(Concluded on page xviii.)



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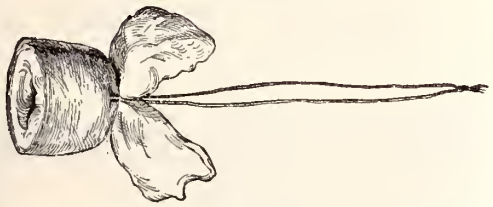
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MEDICAL NEWS

(Concluded from page 608.)

prepared to turn the fund over to Harvard. It was announced, May 7, that Harvard sent the following communication to the trustees of the fund: "Feeling that the corporation would be unable to apply the funds in accordance with the desire of the testator, it was voted to decline the bequest. Harvard College did not deem it right to pledge itself to teach, somewhat permanently, that the treatment of defective and criminal classes by surgical procedure was a sound doctrine."

FOLLOWING THE RESIGNATION of Dr. S. Solis-Cohen, announcement has been made of the consolidation of the departments of medicine and clinical medicine at Jefferson Medical College, Philadelphia. Professor Thomas McCrae remains head of the department of Medicine. Drs. Frederick J. Kalteyer and Ross V. Patterson have been advanced to professors of medicine. Dr. E. J. G. Beardsley and Elmer H. Funk have been advanced to clinical professors of medicine. Dr. J. Earle Thomas, recently associate professor of physiology at St. Louis University, has been appointed professor of physiology to fill the vacancy caused by the resignation of Dr. Albert P. Brubaker. Dr. Charles E. G. Shannon has been advanced to professor of ophthalmology to fill the vacancy caused by the death of Dr. William H. Sweet. Dr. V. H. Moon, professor of pathology at the University of Indiana School of Medicine, has been appointed professor of pathology to fill the vacancy caused by the resignation of Dr. Crowell.

THE FOLLOWING STAFF has been appointed by the Board of Trustees of the newly erected Delaware County Hospital, Upper Darby, to serve the institution beginning July 1, 1927: Consulting Staff—Medicine, Drs. Robert G. Torrey and E. J. G. Beardsley; Surgery, Drs. John H. Gibbon and John G. Carnett; Obstetrics and Gynecology, Drs. P. Brooke Bland and Frank C. Hammond; Pediatrics, Dr. John C. Gittings; Dermatology, Drs. John B. Ludy and Joseph V. Klauder; Contagious Diseases, Dr. J. Lawrence Widmyer; Neurology and Psychiatry, Dr. Clarence A. Patton; Genito-urinary and Cystoscopy, Dr. Percy S. Pelouze. The Senior Active Staff is constituted as follows: Medicine, Drs. Thomas Fitz-Hugh, Jr. and Robert P. Regester; Surgery, Drs. Eldridge L. Eliason and Edward J. Klopp; Obstetrics and Gynecology, Drs. Clifford B. Lull and James F. Carrell; Nose and Throat, Drs. Nathan P. Stauffer and Karl M. Hauser; Pediatrics, Drs. Edwin W. Rodenheiser and Charles H. Weber; Eye, Drs. Charles E. G. Shannon and Hunter W. Scarlett; X-ray, Dr. Augustus H. Clagett; and Pathologist, Dr. Arthur D. Waltz.

THE SIXTH ANNUAL conference of the Hospital Association of Pennsylvania was held in Philadelphia April 21, at the Adelphia Hotel. Among the speakers were Dr. Donald Guthrie, chief surgeon of the Robert Packer Hospital, Sayre; Dr. Charles W. Mayo, also of the Robert Packer Hospital, and son of Dr. Charles H. Mayo, of Rochester, Minn.; Dr. William Pepper, dean of the School of Medicine of the University of Pennsylvania; John L. Burgan, superintendent of the Abington Memorial Hospital; Miss Edith B. Irwin, superintendent of the Westmoreland County Hospital, Greensburg; Mrs. E. S. H. McCauley, State Secretary of Welfare; Dr. B. L. Scott, director of the Bureau of Restoration of the same Department; and Lewis N. Clark, superintendent of the Germantown Hospital. Captain Irving O'Hay made the principal address at the annual dinner held in the evening. Dr. E. E. Shifferstine, superintendent of the State Hospital, Coaldale, was elected president of the association to assume office next year. Dr. Henry K. Mohler, medical director of the Jefferson Hospital, Philadelphia, was installed as president for the ensuing year.

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BOOK REVIEWS

From a reviewer we expect information and advice which will guide us safely and to our profit, warning us of the poor, the mediocre, the commonplace, and inviting our attention to merit.

HOSPITAL HOUSEKEEPING AND SANITATION. By Nora P. Hurst, R.N. St. Louis: C. V. Mosby Company, 1926. Price, $1.25.

This book contains a wealth of good, practical information on the subjects included in the title, and no doubt furnishes a convenient avenue for student nurses to obtain the necessary details of hospital housekeeping and sanitation. It is to be regretted that more time was not spent on the language and construction of the book.

HEALTH SUPERVISION AND MEDICAL INSPECTION OF SCHOOLS. By Thomas D. Wood, A.M., M.D., and Hugh Grant Rowell, A.B., M.D. Illustrated. Philadelphia and London: W. B. Saunders Co., 1927. Price, cloth, $7.50 net.

The reviewer is especially impressed by the voluminous and thorough references in this book of the methods of practice by the various divisions of medical inspection of the health departments of cities throughout the country. It may be regarded as an encyclopedia on school health work containing a variety of information for every and any type of school. The publication is highly recommended and should be in the library of every person interested in medical-school work.

THIS BUSINESS OF OPERATIONS. By James Radley, with foreword by J. M. Withrow, M.D., Chief of Staff, Christ Hospital, Cincinnati. Cloth. Pp. 96. Cincinnati: Digest Publishing Co., 1927.

This is a small brochure containing the impressions of a layman who has been through the mill (in this case the hospital), and whose experiences, in retrospect, have been particularly pleasing to him, so much so that he breaks into print to tell it to the world. The rather thick coating of soft soap applied to the doctors, nurses, orderlies, et al., brings a smile to those in the know, but the average layman, for whom this book was patently written, may find it entertaining and perhaps encouraging. The vein is slightly facetious, with an occasional studied effort to be humorous, but it is not yet to be classed with Irving Cobb's "Speaking of Operations." It is, however, a readable little essay for the doctor's waiting room, or the sun-parlor library of the hospital.

REPORT OF THE DEPARTMENT OF HEALTH OF THE CITY OF CHICAGO FOR THE YEARS 1923, 1924, and 1925. Illustrated, 835 pages.

The triennial report of the Department of Health for the City of Chicago is worth careful perusal by health officers and others engaged in public-health work in any city. It is composed of analytical studies covering all phases of public-health work. Of interest to sanitarians, hygienists, and statisticians, it is not without appeal to the average layman as well.

Of especial interest is the report of the chlorine clinic for the treatment of ordinary colds, and the interesting conclusions as to the value of this gas in destroying bacteria. The report of the morals commission is brief but interesting. Under the laboratory section, an analysis of the serological tests and their value in interpretation, as well as a certain amount of technic, is carefully covered.

The volume as a whole is well compiled and of value in many ways. Medical students would do well to review some such work as this with the thought of obtaining a general idea of the extensive work conducted by an energetic and modern health administration.

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Fig. 1. Syringe with long, slender barrel.

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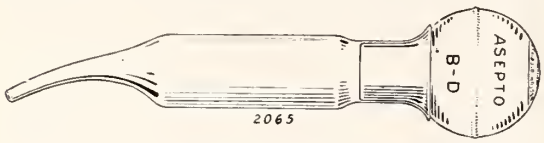


Fig. 2. Syringe for female urethra and bladder.

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Symposium on the Thyroid Gland*

THE PHYSIOLOGY OF THE THYROID GLAND†

EDWARD C. KENDALL, M.D.
ROCHESTER, MINN.

The first contributions to the physiology of the thyroid were made between the years 1890 and 1900. At that time the relations between the conditions known as goiter and myxedema, and the normal action of the thyroid were more clearly recognized through the work of Magnus-Levy, Möbius, and Friedrich von Müller. The first approach to a solution of the problem was therefore made through clinical medicine.

At about the same time Baumann showed that iodin was a normal constituent of the thyroid gland, and many experiments soon followed concerning the effect of the thyroid on physiologic processes. For our consideration much of this work has now but little bearing. However, two investigations which were made at that time will always remain as significant contributions to our knowledge of the thyroid: the influence of the thyroid on the basal metabolic rate shown by Magnus-Levy, and the influence of the thyroid on protein metabolism which was demonstrated by Friedrich von Müller. These two observations indicated that the thyroid was intimately associated with processes of oxidation in the animal organism, and the results of the thirty years' work which has been carried on since that time emphasize the importance of these early observations.

After Baumann had discovered the presence of iodin in the normal thyroid gland, many attempts were made to relate the activity of the thyroid to its iodin content. Through the work of Baumann, Oswald, Hunt, Seidell, and others, it was clearly indicated that the activity of the thyroid was dependent upon its iodin content, and my own isolation of an active constituent in pure crystalline form containing 65 per cent of iodin showed conclusively that the physiologic activity of the thyroid is dependent upon this iodin-containing compound, thyroxin. By the use of this compound it was soon proved that every physiologic effect of desiccated thyroid could be produced by pure thyroxin alone. It not only stimulates growth in cretins, increases mental activity, and ameliorates edema in cases of myxedema, but in addition relieves all of the subjective symptoms and objective signs following the loss of thyroid activity.

Of still greater importance is the fact that the action of the thyroid can be studied in a quantitative manner. The exact result of the administration of 1 mg. of thyroxin can be determined, and Plummer and Boothby have shown that 1 mg. of thyroxin produces an increase of about 3 per cent in the basal metabolic rate. Their results also indicate that the total amount of thyroxin functioning in the body is probably not more than from 10 to 12 mg.

Boothby and Baldes have succeeded in deriving a mathematical formula which accurately predicts the increase and subsequent decrease in metabolic rate following the injection of thyroxin. By the use of this equation they estimate that approximately 0.4 mg. of thyroxin is required daily to replace the thyroxin destroyed in the body.

These results indicate that thyroxin is a substance which acts in a catalytic manner and brings about a reaction intimately associated with processes of oxidation.

The most accurate test of the activity of the thyroid gland is the determination of the basal metabolic rate. From a superficial analysis of the factors involved in the maintenance of this rate it would appear impossible to utilize the oxygen consumption and the total amount of carbon dioxid produced in the body as a criterion concerning the activity of any single gland in the body. However, a careful quantitative investigation appears to justify the statement that the basal metabolic rate does furnish useful information concerning the activity of the thyroid gland. The reason for this is better un-

*Read before the Section on Surgery of the Medical Society of the State of Pennsylvania, Philadelphia Session, October 13, 1926.

†From the Section on Biochemistry of the Mayo Foundation.

derstood if we consider the conditions under which the determination is made, and when we know the influence of various drugs and foodstuffs on this rate. An examination of a large number of substances has shown that none of them significantly influences it for a period as long as twelve hours after their administration. Sugar and protein cause an increase in the rate at which the body produces energy, but this effect does not last for twelve hours. But the most important reason why the basal metabolic rate is of such value in the determination of the activity of the thyroid gland is that thyroxin possesses unique physiologic properties. Accurate determinations have shown that a single administration of a few milligrams of thyroxin exerts its influence for five weeks. Furthermore, the total amount which is functioning in the body is about the same as a single dose of morphin; and yet this minute amount of thyroxin is responsible for approximately 40 per cent of the total energy produced while the body is at rest. There is no other substance known that can so influence physiologic processes. A quantitative study of the value of the determination of the basal metabolism may be summarized in the statement that this test is an index of the activity of the thyroid gland, other factors being standard.

This fact becomes of importance to the clinician, surgeon, and physiologist, and it also furnishes the clue to the chemist by which further progress may be made.

If the thyroid is one of the principal factors determining the rate at which the body produces energy, certain changes should follow either the administration of thyroid material or lack of thyroid function. Physiologic processes which are directly involved in the combustion of metabolites would show definite changes following increased thyroid activity. For example, there may not be an increase in pulse rate, but there must be an increase in pulse pressure and the volume flow of blood. There may not be an increase in the rate of respiration, but there must be an increase in the total absorption of oxygen and in the amount of carbon dioxid given off. There may not be a sustained increase in the breakdown of protein and the output of nitrogen, provided the diet supplies a sufficiently large amount of carbohydrates; but in the absence of sufficient carbohydrates, there should be a breakdown of protein in order to sustain the high level of energy production.

These three factors have been studied: Plummer and also Means have shown that there is an increased pulse pressure in hyperthyroidism and after the administration of thyroid material or thyroxin. Evidence for the influence of the thyroid on the utilization of oxygen is provided by the determination of the basal metabolic rate which involves the actual measurement of the absorption of oxygen and the output of carbon dioxid. Friedrich von Müller was the first to show that the protein metabolism of the patient suffering from hyperthyroidism was increased. Many years later, in 1923, he reinvestigated this same condition and found that the extent of protein breakdown in hyperthyroidism depends not upon the severity of the disease, but upon the type of food eaten by the patient. If sufficient carbohydrate is administered, the protein material is not broken down in cases of hyperthyroidism. These results were recently confirmed and further elaborated by Boothby, Deuel, and Sandiford.

Still other changes have been pointed out. The anemia sometimes found in cases of myxedema is relieved by the administration of thyroid material or thyroxin, and there is an increase in the total amount of hemoglobin. Changes in the tendon reflexes have been found, and the conduction time of the nerves is decreased as measured by the changes in the cardiogram following the administration of thyroxin to a myxedematous patient.[5] Measurement of the acuity of the hearing has shown that the administration of thyroxin increases to a marked degree the sensitiveness of the ear, and also the speed and manner of speech. These manifestations of hypothyroidism, which are closely associated with the state of mental activity, are probably the most striking features in a high-grade cretin or myxedematous patient.

This brief review of the physiologic processes involved in altered function of the thyroid emphasizes the almost dominating control which the active agent of the thyroid exerts not only on the maintenance of the basal metabolic rate but on the activity of all types of cells in the body. No physiologic process can occur without expenditure of energy, and as the accumulating data indicate that the active agent of the thyroid determines the rate at which a cell can produce energy, the importance of this gland in normal physiology becomes apparent.

In addition to the influence upon the basal metabolic rate and the accompanying cellular activity, two other reactions are known which are brought about by thyroxin, but which do not appear to depend upon its stimulating effect on oxidative processes. One of these is the growth of the bones. In certain instances this effect is spectacular. There is the well-known case of the young British student who desired to enter the Military College, but was unable to do so because of his height. He consulted a physician,

who suggested the use of desiccated thyroid. During the following few months this young man was able to grow the inches necessary for admission.[7]

The first cretin treated with thyroxin at the Mayo Clinic was a child ten years old. She was 37 inches in height and weighed 37 pounds. At the end of one year she had grown six inches.[12]

Still further evidence of this influence brought about by thyroxin has been shown by Hoskins. With a derivative of thyroxin she has demonstrated stimulation of the growth of the skull of newborn rats. Besides these influences on the bones there is the well-known test of Gudernatsch which utilizes the rate of metamorphosis of the tadpole. It is impossible to tell what influence the change in basal metabolic rate *per se* has on the growth of the bones and the metamorphosis of the tadpole, but it seems probable that these effects are not dependent solely upon an increase in the rate at which the organism produces energy. It is possible that there is a second physiologic effect of desiccated thyroid, also exerted by thyroxin, which brings about these reactions.

Smith has shown that the pituitary is more intimately associated with growth in tadpoles than is the thyroid, and he suggests that the effect of the thyroid, when given to tadpoles, is really produced by its influence upon the pituitary.

These data bring up the question of the interrelationship between the ductless glands. Many such relationships have been suggested. The suprarenal and the thymus are found hypertrophied in cases of exophthalmic goiter.[2] Marine has pointed out that increase in the basal metabolism sometimes caused by removal of the suprarenal indicates a relationship between the suprarenal and the thyroid. Cannon and Levy have shown that the injection of epinephrin appears to mobilize the active agent of the thyroid, and there are many other bits of evidence, based either on anatomic changes or experimental results, which suggest a close interrelationship between the ductless glands.

It seems to me, however, that this intricate problem cannot be solved until the chemist has progressed somewhat further with a knowledge of the active constituent of each of the various ductless glands. Relationships which can then be shown may be interpreted in terms of chemical reactions, and a fuller understanding of the results will be possible. Such an attempt has already been made in the case of thyroxin and epinephrin, and, while the chemical proof is so far meager and the interpretation possibly faulty, the work which has been done clearly indicates that there is an intimate chemical relationship involving epinephrin and thyroxin. It is suggested that in the living cell these two substances produce their effect by virtue of the fact that they can be oxidized and reduced, and thereby enter into processes of oxidation which permit the cell to produce energy.[13]

This investigation of the physiologic action of the thyroid leads directly into a study of the processes of oxidation in the animal organism. Until recent years this was an unexplored field in biochemistry, and even today we can say very little concerning the exact mechanism. The problem no longer can be advanced materially by an analysis of clinical conditions or by improving the technic in surgery alone, neither can the pathologist carry the investigation to the point of complete understanding.

The problem now lies with the chemist and the physicist; however, both of these must closely correlate their endeavors with clinical observations which have already outlined the problem, established the possibilities, and pointed out the paths which must be followed. A chemical laboratory for the investigation of problems in biologic oxidation should be intimately associated with clinical work. In thyroid disturbances no adequate interpretation of clinical findings can be secured without a consideration of the physiologic activity of the various agents affecting metabolic processes. Eventually these findings will become more significant and useful when we can express the function of the thyroid and the other ductless glands in terms of chemical reactions.

Administration of thyroxin to hypothyroid human beings has already shown that thyroxin alone can relieve all the evidence of thyroid deficiency. An interpretation of this fact is that through the thyroxin molecule, oxidation in the animal organism must be so influenced that in its presence the various tissues in the body can function normally and in its absence they are unable to maintain an adequate rate of oxidation.

However, when it is known that the total amount of thyroxin functioning in the body is only 12 mg. it is apparent that the problem confronting the chemist in interpreting the precise reactions through which thyroxin passes are very difficult. The medium in which the reactions occur is complex, colloidal in nature, and the physical boundaries of cells, rates of diffusion, and so forth, are intimately bound up in the utilization of the thyroxin molecule.

However, it is possible to study some substances which do affect cellular activity, and simple *in-vitro* systems can be constructed which have some of the characteristics of biologic oxidations. From a detailed study of these simpler

systems it can be shown that certain of these substances which act as catalysts in turn require a catalyst for their proper activation. The mechanism is similar to a system of gears which are intermeshed. The presence of one substance profoundly influences the action of another. The thought I wish to leave is that it is possible from a chemical approach to this problem to establish facts which have a definite bearing on the problems of oxidation in the animal organism, on normal and abnormal physiologic states, and specifically on hyperthyroidism and hypothyroidism.

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DIAGNOSIS OF DISEASES OF THE THYROID GLAND

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Diagnosis of diseases of the thyroid gland, in so far as it interests the surgeon, concerns itself primarily with the question whether the disease is a purely local affection or whether it is producing a toxic constitutional state. A further question is: "Shall the disease be treated surgically, and if so is the patient a good surgical risk?" These queries must always be answered conjointly by physician, laboratory worker, and surgeon. In no other domain is coöperation more essential. In no other domain has it had so good an effect on operative mortality.

Assuming that the patient has a swelling in the neck, is it a goiter? The diagnosis is rarely difficult. The enlargement moves up and down in the act of swallowing. By compressing it with the fingers, or if it is unilateral, by pushing it over to the opposite side, the enlargement can easily be made out. It is well to keep a record of the measurements of the neck for comparison. There are cases, however, in which the swelling is slight, perhaps only a small deeply placed nodule in the side of the neck or behind the clavicle; indeed the goiter may be entirely hidden in the upper part of the thorax. The diagnosis of these more or less perplexing conditions will be discussed later.

Having determined, then, the existence of a goiter, the next step is to decide upon its nature. Here we at once reach an impasse owing to the absence of an entirely satisfactory classification. That of Plummer is the most widely accepted, although objections have been voiced against it by a number of writers. Williams and Pearse[1] attribute our difficulties to an attempt to incorporate both clinical and pathologic concepts in our classifications. The best would be an etiologic one. This, however, is quite beyond our ken. The next best is the physiologic or functional. That, too, is beset by many difficulties. The one that I venture to propose is purely clinical, and resembles that of Marine and several other writers.

Classification of Thyroid Affections

Simple goiter	Adolescent, Endemic, Sporadic, Adenomatous, Colloid
Toxic goiter	Adenomatous, Exophthalmic
Malignant goiter	
Granulomatous goiter	Syphilitic, Tuberculous
Thyroiditis	
Hypothyroidism of mild type without myxedema	
Myxedema	Spontaneous, Postoperative
Cretinism	

Simple Goiter

In the diagnosis of simple goiter the salient point in many instances is to recognize its non-importance rather than its importance. The word goiter is as little understood among laymen as the phrase high blood pressure, and to use it has quite a comparable effect on the psychology of the patient.

Simple goiter is endemic in large areas of the United States. Its endemicity is attributed to a deficiency of iodin in the drinking water and the food. But simple goiter is not limited to the goiter belts. It is frequent in Philadelphia and in other cities at or near the seacoast. With us it is most common in adolescent girls, while in goiter centers it is found in both sexes, although with much greater frequency in the female sex. Generally there is no difficulty in the diagnosis, but at times the child presents nervous symptoms and tachycardia suggesting the existence of hyperthyroidism. While these symptoms may be due to actual thyroid intoxication, they often come from other causes. They may result from an anxiety neurosis engendered in the child by the mother's fears, or the girl may have grown too fast so that she lacks strength and stability, such asthenia being often associated with rapid heart. In one of my own cases—a girl with an adolescent goiter—a mild rheumatic endocarditis was responsible for the cardiac symptoms.

The basal-metabolism test is here of much value; it will be found to be normal or subnormal in simple goiter. There is, however, a group in which, with a subnormal basal metabolic rate, definite thyrotoxic symptoms are in evidence. Martin[2] has reported a series of such cases. They yield rapidly to iodin medication.

The importance of correct diagnosis in simple goiter, particularly in adolescent goiter, lies in the fact that, barring exceptional instances, we can assure the anxious mother of the harmlessness of the trouble and the needlessness of surgical treatment.

A simple nontoxic goiter may attain large proportions through colloid change. For cosmetic reasons or because of serious pressure upon the trachea, the recurrent laryngeal nerve, or other neighboring structures, surgical interference may at times be required. This particular type of case is found especially in goiter districts, or at least in persons who have lived in the goiter belts here or abroad. The diagnosis is usually a simple matter; only one point must be remembered, namely, the possibility of malignant change in the gland.

Adenomatous Goiter

Simple adenomatous goiter, that is, adenoma without hyperthyroidism, is a very common condition. The adenomas are usually small nodular masses from one-half inch to three inches in diameter, and represent circumscribed or diffuse increases in gland acini. They are probably congenital in origin.[3] As a rule they are symptomless except for the local enlargement, but they may attain considerable size and exert pressure on neighboring structures, or they may become functionally hyperactive. This occurs usually in persons over forty, and causes a form of hyperthyroidism closely resembling that of exophthalmic goiter.

Toxic Goiter

The diagnosis of toxic goiter, whether adenomatous or exophthalmic, is based on a group of rather striking symptoms, among which the most important are the goiter, nervousness, tachycardia, tremor, certain eye signs, and a supernormal basal metabolic rate. The cardinal symptoms, as they are called, are not always present in their totality, so that it is a good rule, when a patient has prominent eyes and palpitation, to think of the possibility of hyperthyroidism. The goiter may be small, or it may be retrosternal and not visible. The eye signs are often not marked in toxic adenoma. Moreover, tremors and nervous erythism are found in various forms of neurasthenia. The effort syndrome of war time, which is by no means uncommon in this present era of supposed peace, may closely resemble toxic goiter. Another not infrequent mistake to which Musser[4] has called special attention is to interpret early tuberculosis as exophthalmic goiter. The eyeballs are sometimes very prominent in chronic glomerular nephritis, and might cause the latter to be mistaken for toxic goiter. The surest way to arrive at a correct diagnosis is by means of the basal metabolic rate, which in toxic goiter is

practically always raised considerably above the normal. The work of DuBois, Boothby and Sandiford, Means and Aub has shown that hyperthyroidism gives consistently high metabolic readings. Various satisfactory instruments are upon the market, and if due precautions are taken to quiet the fears of the patient beforehand, the results are dependable. In the latter months of pregnancy the basal metabolic rate may be 25 or 30 per cent above normal without any hyperthyroidism.[5]

Even without the basal-metabolism test it is usually possible to make the diagnosis of hyperthyroidism if we bear in mind the possibility of the condition. There is something peculiar about the nervousness of goiter patients that serves to differentiate it from ordinary neurasthenia or psychasthenia. There is an intense motor restlessness; the patient cannot sit still in one place, he beats a tattoo with his feet, crosses and recrosses his legs at frequent intervals, etc. His movements, though not inchoate like those of chorea, have something of the quick and restless character of that disease.

To the experienced hand, the skin has a suggestive feel: it is warm, moist, thin and delicate, and usually shows dermographia. The heart action, apart from being rapid, has a peculiar quality: the sounds are snappy and hard, differing from those heard in tachycardia of nonthyroidal origin.

An interesting and at times diagnostically valuable feature is presented by the blood pressure. In a large proportion of my own cases, larger than in some of the statistics I have seen in literature, the systolic pressure was high and the diastolic low—at times as low as in aortic insufficiency.

Some writers have laid stress on a relative lymphocytosis, but it has not impressed me as an important feature. Great loss of weight in spite of a large food intake is very suggestive of hyperthyroidism when diabetes is excluded.

In some cases the temperature is persistently elevated, running between 99° and 100°, often for months, and occasionally for years.

The Goetsch test and the Kottmann reaction are of little value in the diagnosis. The mydriasis test of Pitfield (*Medical Journal and Record*, June 2, 1926) deserves further study. Pitfield found that if he injected into a rabbit 1 c.c. of blood serum from a patient suspected of having hyperthyroidism and then instilled adrenalin solution 1 : 1000 into one eye of the rabbit, mydriasis would occur if the serum came from a thyrotoxic patient.

With regard to distinguishing between early tuberculosis and the milder types of exophthalmic goiter, it is necessary, besides determining the basal metabolic rate, to make x-ray studies of the chest, sputum examinations, and to keep careful temperature records—in fact to do all we have learned to do in order to make sure of the diagnosis of incipient tuberculosis.

I shall not enter into the controversy whether toxic adenoma and exophthalmic goiter are two different diseases having a diverse etiology, as is maintained by Plummer and his associates of the Mayo Clinic, or whether the unitarian view held by Crile, Wilson, Graham, and others is correct. It would seem to me, however, that toxic adenoma and exophthalmic goiter do not differ to a greater degree than cases of exophthalmic goiter differ among themselves. Nevertheless it is desirable to point out certain interesting differences between the two types of thyrotoxicosis.

Hyperthyroidism due to toxic adenoma usually develops after the fortieth year; exophthalmic goiter is more often a disease of earlier life.

It is a curious fact that toxic adenoma, even if small, can produce marked cardiac symptoms —auricular fibrillation, paroxysmal tachycardia, and even congestive heart failure. Lahey and Hamilton have pointed out that a certain proportion of cases of cardiac decompensation, in which the ordinary causes are wanting, are due to small toxic adenomas. That this is a clinical fact has been demonstrated by the results of thyroidectomy. It follows, therefore, that in every case of decompensation in which the usual causes are not in evidence, if there is rapid heart action and some exophthalmus, adenomatous nodules should be looked for and a basal-metabolism test made.

Exophthalmus is less marked in adenoma than in exophthalmic goiter.

Hypertension, which may occur in any form of hyperthyroidism, is probably more frequent in toxic adenoma than in exophthalmic goiter. While hypertension may accompany goiter, there is a condition in which hypertension is the outstanding or dominant feature, certain thyrotoxic phenomena being added secondarily. The patients I have in mind who present this association are women at or past the menopause, without goiter, without definite exophthalmus, but suffering from tachycardia—at times from auricular fibrillation—and from tremor, vertigo, and nervousness. The rise of blood pressure, unlike that of exophthalmic goiter, affects both the systolic and the diastolic pressure. In my own cases, the syndrome has been of slow progress, terminating either by cardiac decompensation or by apoplexy.

Basal-metabolic studies are certainly needed in this form of hypertension with thyrotoxic features.

One other point should be mentioned as of considerable importance in any distinction we may wish to draw between toxic adenoma and exophthalmic goiter, and that is the effect of iodin medication. Iodin usually improves cases of exophthalmic goiter; it often makes toxic adenomas a great deal worse, and is even capable of whipping a nontoxic adenoma up to the point of toxicity.

In addition to the well-known symptoms of hyperthyroidism, there are a few that are less well known, and are therefore open to misinterpretation. Thus, habitual vomiting with extreme emaciation may be due to a manifest or concealed goiter, the condition yielding to operation or x-ray treatment if the underlying cause is recognized. In rare instances chronic arthritis seems to be dependent upon a hyperthyroid state.[6] An abnormal thyroid gland may have something to do with certain cases of prolonged nausea and vomiting in pregnancy.[7]

Malignant Goiter

Malignant goiter is so serious a condition that it should be diagnosed as early as possible, since delayed operation means local spread and distant metastasis. Unfortunately, many are in the beginning encapsulated and appear to be ordinary adenomas. By bearing in mind the following points a timely diagnosis may be arrived at: (1) Carcinoma usually develops in a preëxisting adenoma. (2) If a nodule long quiescent in a person over forty takes on sudden growth, the probabilities are that cancer has developed. (3) A hard nodule in an individual of the cancer age, between forty and fifty, with normal basal metabolic rate, should be viewed with suspicion. (4) Extension of the growth to neighboring glands, to the lungs, to the recurrent laryngeal nerve, is convincing but belated evidence of malignancy.[8]

Intrathoracic or Ectopic Goiter

I have referred to this before. The existence of such a goiter can be conjectured by finding an area of percussion dullness over the upper sternal region larger than normal. It is confirmed by an x-ray examination. The characteristic radiologic finding is a crescent-shaped mass in the upper mediastinum which may be distinguished from an enlarged thymus or thymic tumor by the fact that the latter is not crescentic but trapezoidal in shape, widening out toward the base.

Aberrant thyroids are small nodules of thyroid tissue found in regions of embryonal clefts—in the lingual or medial region, and laterally beneath the sternocleidomastoid muscle. The median ones, by enlarging, may be the cause of pressure symptoms. They rarely become malignant. The lateral nodules have a decided tendency to cancerous change.[9]

Evaluation of the Patient as a Surgical Risk

The character of the preparatory work performed in modern hospitals in order to determine what might be called the operability or operative qualifications of a patient, is to my mind one of the greatest triumphs of medicine in our time. If some medical Rip van Winkle, asleep only a score of years, were to wake and see what is being done before a patient is subjected to an elective operation, he would open his eyes wide but disbelieve their message. The laity, of course, have no conception at all of the care that is now taken in connection with all but emergency operations.

Perhaps no patients receive more of this meticulous care than those who are to be operated on for goiter. From a medical point of view it is essential, of course, to make the routine examinations of the blood and urine, to study the temperature and the blood pressure, and, whenever and wherever possible, to estimate the basal metabolic rate. But these things are not sufficient. It requires a careful clinical investigation of the patient as a whole—a serious study of his cardiac response, of his psychology. An individual extremely toxic and in a high state of nervous excitement is not a good risk. The presence of cardiac decompensation should act as a stay to the operation until the circulation is improved. It is only by an accurate and painstaking diagnosis of all the secondary conditions that catastrophes before and after operation can be avoided. The use of digitalis in the decompensation cases and of Lugol's solution in the highly toxic cases, plus delay, has greatly reduced operative mortality.

Granulomatous Goiter

Both syphilis and tuberculosis occur in the thyroid gland, but they are so rare that little need be said about them. In the case of demonstrated syphilis reported by Groedel and Hubert,[10] the characteristic features were marked tenderness on pressure and a positive Wassermann reaction. There are, however, cases without pain, and in them syphilitic manifestations must be looked for elsewhere. A positive Wassermann aids in diagnosis.

A word might be said about the diagnosis of hemorrhage into the thyroid gland. This may be the cause of sudden death. It may be spontaneous, or the result of trauma.[11] Hemorrhage may be suspected when there is a sudden acute enlargement of a goitrous thyroid or even of a normal thyroid without evidence of inflammation, especially if there is a history of trauma or great muscular strain. Acute hemorrhage may be responsible for the sudden development of toxic thyroid symptoms.

Mild Hypothyroidism Without Myxedema

This condition, to which Higgins has called attention,[12] occurs at all ages but is most common near the menopause. It must be looked upon as an early stage of true myxedema. The basal metabolic rate is from —11 to —25. The principal clinical symptoms are dryness of the hair and skin, neuroses of various types, and vague, unclassifiable pains.

Myxedema

In no disease is the endocrine origin so well demonstrated as in myxedema. The diagnosis of the affection is easy if its existence is borne in mind; otherwise it may be overlooked.

The patients are usually middle-aged women with heavy features, coarse scanty hair, slow mentality, and a dry skin which is puffy and infiltrated but does not pit. Fatty pads are present above the clavicle. The body temperature is subnormal, and the patients are sensitive to cold. The basal metabolic rate is reduced to twenty or forty below normal. The thyroid, as a rule, cannot be felt; if present, it is a functionless organ. Hypertension often coexists. The patellar reflexes show delayed response.[13]

Myxedema must be differentiated from pernicious anemia, chronic nephritis, acromegaly, and senile dementia.

Pernicious anemia: The diagnosis of this disease is made by the blood picture, the achylia gastrica, the spinal-cord and eyeground changes, the icterus index, and the occurrence of febrile paroxysms.

Chronic nephritis with edema: The edema of nephritis pits on pressure; that of myxedema does not. The urine and blood show characteristic changes. Effusions are likely to be present in the serous cavities. The basal metabolic rate is within normal limits. It should be remembered, however, that nephritis and myxedema often coexist.

Acromegaly: In this disease, the face, instead of being full-moon shaped as in myxedema, is elongated and triangular, the supra-orbital ridges are prominent, the jaw prognathous, the oral cavity and tongue enormously enlarged, and the hands and fingers likewise enlarged, the fingers being sausage-shaped. Vision is frequently disturbed in a characteristic manner.

Senile dementia: The differential diagnosis is best made by the therapeutic test—the use of thyroid extract or thyroxin.

Postoperative Myxedema

This results from removal of too much thyroid-gland tissue. As it usually does not attain a high grade it may be overlooked. It is characterized by mental sluggishness, cessation of menses, subnormal temperature, and, most important, by a subnormal metabolic rate.

Chronic Ligneous Thyroiditis (Riedel's Struma)

This condition presents itself as a stony-hard, goitrous enlargement of the thyroid gland, with adhesion to the neighboring structures. It resembles carcinoma, but in the latter, if the growth is at all adherent, it also involves the skin. Ligneous struma does not. Thyrotoxic symptoms are absent, nor is there any evidence of myxedema. Tremor and nervousness may be present, but the basal metabolic rate is usually normal. Fever is absent in the majority of cases. The etiology of this affection is unknown Bacterial studies so far have been negative.[14]

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THE TREATMENT OF GOITER

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If one were to review comprehensively the subject of the treatment of goiter, giving consideration to all the methods which are now being practiced or which have been suggested in the past, it would be necessary to enumerate the whole gamut of pharmaceutical preparations in their many and varied combinations as well as countless fantastic and bizarre therapeutic vagaries from the feeding of dried and pulverized marine sponges to powwowing. In Dublin, last summer, Sir William Wheeler told me that the introduction of surgical treatment of goiter in Ireland was proving an uphill fight and that, when asked by his pupils regarding the medical treatment, it was his custom to reply: "A-aconite, B-belladonna, C-calomel, D-digitalis," etc., etc.—and this in the city where Graves first accurately described the disease which bears his name.

Of the therapeutic methods at present at our disposal, surgery furnishes, incomparably, the best means of curing that condition we refer to as goiter. That this statement should be qualified so as to rule out the colloid thyroids of adolescence goes without saying, but with the adenomatous and hyperplastic goiters, especially when accompanied by those symptoms grouped under the syndrome of "hyperthyroidism," it is incontestably true.

We are still floundering in a mire of uncertainties regarding the functions of the thyroid gland, although our knowledge of its physiology is probably greater than that we possess concerning any of the other glands of the endocrine system. We are also hobbled by a tangle of contradictory and often hopelessly confusing data regarding the pathology of thyroid disease. Witness the diametrically opposed views of such careful and experienced workers as Marine, Lenhart, and Graham on the one hand and of Plummer, MacCarty, Wilson, and Reinhoff on the other. The reasoning of any of these authorities taken separately, seems logical and conclusive, yet when considered collectively, results in "confusion worse confounded." As for exact information regarding the etiology of goiter, we have nothing beyond the fact that lack of iodin is a predisposing factor.

SURGICAL TREATMENT

In discussing the surgical treatment of goiter, we are on firmer ground, for, in spite of the attacks made upon it by those who would advocate other means of handling the disease, in the clinics where many goiter patients are seen and where a well-organized working team has been developed, the results from surgical excision are so incomparably superior to other forms of treatment that the question is placed entirely outside the pale of controversy.

Such a statement may call forth protests from certain quarters. It always has in the past, and probably will continue to do so for some time to come. In this connection I have often felt it would be desirable for the State Society to appoint a commission whose function it would be to consider the various treatments now advocated in the treatment of goiter, allotting to the radium school, to the roentgenologist, to the man who relies strictly on drugs, and finally, to the surgeon, a group of cases of similar type and equal intensity of dysthyroidism. These patients would be followed through their courses of diversified treatments, and all accounts would be checked in a careful follow-up survey at the end of a three- to five-year period, to determine conclusively the best procedure. Personally, of course, entertaining the surgeon's viewpoint, I would stake my all at any odds on the results from surgical treatment.

A paper on the operative treatment of goiter always provokes a discussion on the part of some one opposed to surgery and who advocates, in its place, some sort of nonsurgical procedure. The usual statement of such a person is that, among the goiter patients under his care, at least a third have previously been operated upon and without result. In anticipation of such comments may I say it is true that there is some ill-advised thyroid surgery performed by those inexperienced in this highly specialized branch, yet properly applied surgery will bring results,

unequaled by other means of treatment. Furthermore, and equally true, the surgeon never sees a goiter patient who has not received varied and fantastic nonsurgical treatment over an interminable period, who has not been deluged with drugs of all sorts for months and who has not been "cured" medically at least six times.

When we witness the surgical work of such masters as Sistrunk and Pemberton of Rochester, Lahey of Boston, Frazier of Philadelphia, Crile of Cleveland, Dunhill and Joll of London, Wilkie of Edinburgh, De Quervain of Berne, or de Martel of Paris, we are impressed with the fact that thyroid surgery has been placed on an especially high plane and that it is adding luster to the science and art of surgery as few other operative procedures have within the past thirty years. Within the past few months I have visited all of the above-mentioned men, visits illuminating and inspiring, stimulating one to a more meticulous study of this curious and protean disease with its countless and unexpected dangers to the patient, its manifold anxieties to the surgeon, and the tremendous satisfaction which comes from its successful mastery.

The widespread interest at present being exhibited in the subject of the thyroid gland has resulted in the performance of a prodigious number of ill-advised goiter operations, operations too frequently executed by the occasional operator whose lack of experience and surgical judgment often permit him to carry out procedures definitely contraindicated or to plan and time his operation so badly as to render a grave condition far more serious, frequently resulting in crippling and permanent complications or even in death. The vogue of operating on young girls with small, endemic, adolescent thyroids, operations performed without the slightest indication other than the presence of a slightly enlarged thyroid, is especially to be deplored, yet such operations are today being performed in this country by the thousands.

Moynihan has said that surgery of the gasserian ganglion is "work for the novice" compared with that of the biliary ducts. I should like to enlarge this statement slightly by saying that surgery of the common and hepatic ducts is child's play compared with surgery of exophthalmic goiter. No branch of our art requires keener judgment and a higher order of technical skill or proves more harassing to the surgeon than surgery of toxic goiter. If this be true, then one can readily explain the disrepute into which goiter surgery sometimes falls, as well as the extraordinary fear of operations that seem to obsess all patients who suffer from thyroid disease. However, in the whole realm of medicine there is nothing more miraculous than the improvement made by the patient suffering from toxic goiter whose case has been properly handled by surgical means.

Surgical treatment varies greatly with the individual case, but it consists essentially in resections of a large portion of the affected gland, after certain important and carefully planned preoperative studies and preparations have been carried out. No patient requires more careful observation nor more thorough preoperative preparation than does the patient suffering from toxic goiter, and on these two things successful results will largely depend. When appropriately handled, the thyroid patient is given even greater attention than, for instance, the urologist gives his bad-risk prostate patient. With the latter, the careful bladder drainage, the repeated blood-chemical studies of renal function, etc., are no more essential than the frequently repeated determinations of basal metabolic rates, the making of electrocardiographic studies of neuromyocardial states, the application of such measures as complete rest, the use of digitalis, of Lugol's solution, and finally and most important, the accurate timing of the operation, the planning of the type of procedure to be carried out, and the decision as to how much of the gland and what portions of it to remove.

It is as illogical as it is unscientific to prescribe a routine standardized thyroidectomy for all cases. Since every patient is a law unto herself, the operation must be planned to fit the individual case—individual as to the patient's age, as to the type of gland pathologically, and especially as to the degree of associated systemic symptoms.

I am quite convinced that the usual bilateral resection, as often routinely performed in large series of cases, is bad practice. When carried out as a regular and unmodified procedure, a definite percentage of incidences of postoperative hypothyroidism results. It is not often true that a bilateral superior ligation will be sufficient to cure a case of early exophthalmic goiter, but occasionally it is all that is necessary, and to continue further with such a case is not only bad surgery, but will frequently leave the patient a permanent sufferer from postoperative myxedema. This is especially true in the case of young girls with early symptoms. On the other hand, to do too little is almost as bad, although not quite, for one may always remove more tissue. A patient of middle age who has had a unilateral lobectomy or resection may be cured for a time, yet within a period of years the patient is usually a sufferer from a recurrence, the latter state often being more severe than the

first. The point I wish to make is that patients with toxic goiter cannot be brought to the hospital and operated upon with impunity the next day by bilateral resection, and then be sent home in a week or two to disappear permanently from the surgeon's view. No type of patient should have more careful preoperative study and, equally important, more thorough and persistent postoperative follow-up than the patient undergoing treatment for the relief of dysthyroidism. Such a patient cannot be so perfunctorily handled as, for example, the patient with gall stones, pelvic disease, or even peptic ulcer. Of course, superficial methods are never justified in any case, but, while with conditions just mentioned, careless methods may not always make a material difference, with the toxic-goiter case they will prove fatal.

The usual toxic patient requires from one to four weeks of the closest study and carefully planned treatment before operation is attempted. Several operations may be necessary, each carrying the patient to a more favorable phase, although since the introduction of iodin in the preoperative treatment the multistage operation is becoming far less common. We are by no means dealing with an unessential organ that may be summarily cut out and discarded. Instead we are concerned with a curious and many-sided disease involving one of the most essential organs of the body, an organ that cannot be totally excised without endangering life, and an organ which when operated upon, must be handled with the greatest consideration for its normal physiology and for the amount of tissue that must be removed adequately to correct the condition being produced as the result of the gland's dysfunction.

The Use of Iodin

The introduction by Plummer of iodin in the preoperative treatment of exophthalmic goiter has given to the whole question a new and interesting turn. Of unquestioned value when given over a short period of time just prior to operation, its rapidly spreading vogue as a home remedy among the laity is frequently precipitating a state of activity in what, otherwise, were quiescent glands. The widespread use of Lugol's solution is making the study of the pathology of exophthalmic goiter ever more difficult from the standpoint of the pathologist. Where formerly the laboratory worker was furnished quantities of unchanged freshly excised hyperplastic gland, it is now rare for tissue to reach him that has not been so influenced by iodin that the picture of histologic hyperplasia is rarely seen. In its place there appears the recessive gland, which to all intents and purposes assumes the form of a simple colloid. The work of Marine and Lenhart, performed years ago, on the influences of iodin on the thyroid tissue of dogs, and now repeated clinically in humans by Reinhoff, clearly demonstrates the profound effect iodin has upon the activity of the cells of the acini and on the production and storage of colloid, and parallels what is demonstrated clinically in the improvement of the toxic patient to whom Lugol's solution is administered.

Iodin has its place, but also its definite and clean-cut limitations. In the hands of the public-health worker it is a positive prophylactic in endemic colloid goiter. As a curative measure in colloid goiter, once the condition has developed, it has proved a decided disappointment. Given over a period of a few days as a preoperative measure, it has unquestioned value. As an agency in the attempted cure of toxic goiter it is proving exceedingly dangerous.

As a result of long-continued treatment, usually administered at the hands of the family physician who accepts the present vogue of iodin, we are beginning to see, in ever-increasing numbers, a new type of thyroid case. To the thyroid clinic comes this patient with a history of having had for some years a nodular, inactive goiter and who, for months past, has been taking iodin in one form or another. Such patients suffer from mild to markedly severe hypothyroidism with elevated metabolism and with uncontrollable tachycardia. Weeks of rest in bed are often required to bring about a remission of symptoms, symptoms often so intractable that it seems quite impossible to get the patient into a satisfacory condition for operation. These are the cases referred to twenty-five years ago by Breuer as "iodin Basedow" and over seventy years ago by Rilliet as "constitutional iodosin."

It has been my observation that iodin can be used with definite benefit in the toxic adenomatous cases as well as in the purely hyperplastic types, and in this I agree with Graham and Cutler. Many of the toxic cases are "mixed" types anyway, one type overlapping the other, for many hyperplastic glands contain adenomas, and many large, nodular, so-called "adenomatous" goiters are not adenomatous at all. There is need for greater accuracy in our terminology in speaking of the pathology of the thyroid gland.

Briefly, I would sum up the status of iodin as follows: Iodin is a valuable means of preventing goiter in the very young. It is of unparalleled value, given just before operation, in thyrotoxicosis in any type of goiter, be it

adenomatous or not. Given under any other conditions it is useless, very often much worse than useless. Plummer's introduction of Lugol's solution was a very great contribution, but he has constantly warned us to use the drug with discretion.

Toxic-goiter patients are most susceptible to psychic disturbances. At the Geisinger Memorial Hospital, if the nervous symptoms are marked, the patient is placed in a private room irrespective of whether or not she is a "pay case." All operations are performed under local anesthesia preceded by morphin. I have had no experience with scopolamin. Lahey still uses it, as does Jackson, although it has long since been given up at the Mayo Clinic. Lugol's solution is given in ten-minim doses three to four times a day for about eight days, and is continued for several days after the operation. All wounds are drained by means of a small tube removed on the second day. Luminol may be given the night before operation.

I agree with Frazier and Lahey that there still exists a definite utility for the multistage operation. Truly enough, the use of Lugol's solution has greatly reduced its necessity, yet two-stage resections and occasionally ligations should, by no means, be completely discarded.

The mortality following surgical treatment is as low or even lower than that of the treatment of any major surgical disease. In a series of 1,142 consecutive cases of all types of goiter, toxic and nontoxic, malignant, substernal, etc., operated upon at the Geisinger Memorial, the mortality was 2.5 per cent. With the benign and nontoxic cases, the mortality is constantly below one per cent.

In malignancy, the gravest of the conditions affecting the thyroid gland and occurring in about three per cent of all goiters, surgery is contraindicated. It is true that many patients have been cured by operative means, but in these cases the diagnosis was usually made in the laboratory and was unsuspected in the operating room. In the case of carcinoma so fully developed that the diagnosis can be made preoperatively, radium and the x-ray offer, by far, the greatest hope.

COMMENT

There is a satisfying unanimity of opinion among those American surgeons who are doing sufficient goiter work to permit them to speak with some degree of authority on the question of the treatment of thyroid disease. I believe a representative cross section of this opinion is as follows:

(1) The colloid, so-called adolescent goiter of young people is not a surgical condition, and the treatment of patients with this type of gland had far better be left to the internist.

(2) Adenomas in young patients under the twentieth year may with safety be watched, although adenomas persisting after this time should be removed, if only as a prophylactic measure, for many will ultimately be accompanied by hyperthyroidism, and a certain percentage will become carcinomatous.

(3) Adenomatous goiters which have already produced toxemia should be removed, usually by the operation of bilateral subtotal thyroidectomy. The problem, however, is then far more difficult than it would have been had the operation been performed prior to the development of systemic symptoms.

(4) The hyperplastic, or true exophthalmic goiter, is a law unto itself, as a rule occurring in younger patients and with somewhat different neurologic and cardiovascular manifestations than is the case with the toxic adenoma. The problem, nevertheless, is similar, and the treatment ultimately the same. Whether we accept Plummer's hypothesis that exophthalmic goiter and toxic adenoma are separate and distinct diseases, or are of the opinion that we are confronted merely by "clinical variations of a single morbid state," as claimed by Graham, the treatment does not vary, although its application is along somewhat different lines.

(5) Iodin has a definite place in the prophylactic treatment of adolescent goiter. In the hands of the experienced professional man it is of great value when given immediately before and again after surgical excision of the gland. In the hands of the layman it is proving an uncertain and dangerous agent.

(6) The complexities of the goiter problem make it not only desirable, but quite essential, that the patient come under the observation of a group trained in the handling of this disease, the so-called "thyroid clinic," in which the surgeon plays an important rôle but one of no greater importance than that taken by the cardiologist and the laboratory worker.

Crile in a recent communication has reviewed the subject of the treatment of goiter, and has stated the case of surgery in language so accurately and tersely couched that it can hardly be improved upon.

"We believe that we now have sufficient data on which to base the judgment that, important as is the partial rôle of a rest cure, roentgen ray, radium, any form of iodin, thyroid extract, general medication, general hygienic regulation, the

overcoming of autointoxication, the removal of focal infections, or dietary control in the treatment of this disease, no one of these measures, and not all combined, approach the certainty and efficiency of surgical treatment as the primary mode of attack, supplemented by the measures mentioned above.

"This conclusion is based not only on the immediate but also on the remote mortality, that is, on the expectancy of life no less than on the conservation of organic function and the general well-being of the individual. Surgical treatment, supplemented by whatever lesser means of attack are indicated in the individual case, not only conserves life and function but is of economic value also; viz., it is the shortest road to recovery."

ABSTRACT OF DISCUSSION

Of Symposium on the Thyroid Gland

James D. Heard, M.D. (Pittsburgh, Pa.): In the study of ambulant goiter patients, the estimations of the basal metabolic rate can often be made with advantage in the private rather than the hospital laboratory. Thus an important disturbing factor can be eliminated; namely, the heightened nervousness of the patient occasioned by the unfamiliar surroundings and personnel. Elimination of this factor may result in readings 20 per cent lower than where the element of fear is present to a marked degree. It is as a result of sound reasoning that many physicians have added to their office equipment one of the various instruments by which the basal metabolic rate can be determined.

A fluoroscopic examination can often be made with advantage by the clinician himself, since a routine search for evidence of substernal thyroid will occasionally be richly rewarded. Felderbaum and Feinsilver (*American Journal of the Medical Sciences*, February, 1926) state that in the upper sternum any shadow which shows a definite line of demarcation and which is separate from the aorta is usually evidence of retrosternal goiter. Such shadows are generally interpreted by the radiographer as evidence of aneurysm. Valuable as the results of x-ray examination may be, it must be remembered that in soft goiters the x-ray picture may be misleading. Thus, Hertzler writes that he has repeatedly operated on patients regarding whom x-ray examination had apparently shown the presence of goiter under the sternum, only to meet with disappointment, while on the other hand he had much more often operated on patients whose chests were negative to the x-ray only to find large goitrous masses present.

Conservatism must also govern the interpretation of the results of clinical examination. Thus, in attempting to estimate the size of an enlarged thyroid, I have found little help from neck measurements, my experience being that such measurements are seldom reliable. Neither have I been able by percussion to gain much information as to the presence of a small substernal thyroid, and this for a similar reason.

By an analysis of the history, physical signs, and laboratory findings, a diagnosis can be made without difficulty in many cases of adenoma with hyperthyroidism and in most cases of exophthalmic goiter. There remain other instances in which difficulties are encountered; available evidence as to the presence of hyperthyroidism may be contradictory, and it may be necessary for the clinician carefully to follow the clinical course of the case before he is able to arrive at a decision. Hertzler's caution as to the danger of regarding any goiter as simple may well be borne in mind: it is safer in such instances to regard the thyroid as "not yet toxic."

It now appears that the indiscriminate use of iodin as a prophylactic measure against goiter may, in certain instances, result in activation of a thyroid which had previously been harmless. At least in regions in which goiter is not extensively endemic, prophylactic administration of iodin should be individualized.

Medical treatment of colloid goiter appears to be fairly satisfactory; that of adenoma is surgical from the outset. The treatment of exophthalmic goiter cannot be standardized. The decision must be based upon evidence which is made available by study of the individual patient. In our present state of knowledge, it would appear that most of these patients should be referred to the surgeon, but in full recognition that surgical treatment of goiter is fundamentally unscientific. With a better knowledge of the etiology of exophthalmic goiter, treatment will eventually be directed toward the removal of the cause of the disease rather than toward a direct surgical attack on the thyroid gland.

Donald Guthrie, M.D. (Sayre, Pa.): I should like to discuss very briefly (1) the use of digitalis for the thyrotoxic heart, (2) the management of the nontoxic goiter patient, and (3) the dangers of the incorrect use of iodin in goiter therapy.

It is impossible, in many cases, to improve the tachycardia or irregularity of the heart in thyrotoxicosis by giving digitalis so long as the toxin is running rife within the body. One might as well try by the use of digitalis to slow down the heart of the alcoholic who is continually taking alcohol as to slow down the tachycardia seen in exophthalmic goiter or toxic adenoma. The question of whether this drug should be given preoperatively or postoperatively to the thyrotoxic patient is much debated. We have reason to believe that its use except in the patient with decompensation preoperatively is extremely unwise and unsafe in many instances. The mortality for toxic adenoma in the Mayo Clinic since discontinuing the use of digitalis preoperatively and postoperatively has been reduced from three to less than one per cent.

What is the proper advice to give the patient with a quiescent nontoxic adenoma? In former days I was extremely conservative on this subject, but I have become more radical because the great majority of these patients will develop toxic symptoms after a certain number of years, because it is in this type of goiter that malignancy develops, and because the disfigurement of adenoma is extremely embarrassing to a young woman. It seems to me that the quiescent adenoma should be dealt with radically and gotten out of the way.

Tremendous harm results from the indiscriminate use of iodin. It is known without a doubt that this drug will stir up the quiescent adenoma into toxicity, and further, the use of Lugol's solution in the treatment of exophthalmic goiter is also dangerous when it is misunderstood and misapplied. In our clinic we see many patients who come with this history: "I went to this physician and was given a large bottle of iodin with

instructions to take a teaspoonful three times a day. After a week's treatment and for two or three weeks thereafter I felt fine. I began to gain weight, my nervousness left me, and I thought I was cured, but I am sorry to say there has been a return of all my former symptoms." In other words, the psychological moment for a surgical attack was lost because the physician employed iodin too long. These patients should be accepted for operation during the stage of maximum improvement.

A. E. ROUSSELL, M.D. (Philadelphia, Pa.): Probably 65 per cent of true exophthalmic-goiter cases can be cured by a few applications of x-rays. I now have on record some 83 cures, representing an average of about 65 per cent, and many thousands of such cases are reported from all parts of the world. When this method was first discussed, we were told it would produce fibrous tissue which would interfere with subsequent operative measures. This is not true. If patients do not improve under x-ray treatment, they are in as good condition to be operated upon subsequently.

If a distinction could be made between normal and toxic secretion, iodin would probably be found of use in a toxic rather than a normal condition.

ISRAEL BRAM, M.D. (Philadelphia, Pa.): The responsibility of the surgeon in the treatment of exophthalmic goiter cannot be overemphasized, because we know very little of the cause of this disease and surgery does not necessarily cure it. The surgeon is a life-saver in simple and toxic adenoma and in substernal goiter. But in exophthalmic goiter there are so many complex problems involved which call in question the advisability of surgery.

There are three points which it would be well for us to try to settle once and for all. (1) Iodin drugging, as has already been mentioned, is a menace to the welfare not only of goiter patients, but also of those who are susceptible to goiter. As a result of it simple goiters are made larger and toxic goiters moribund. (2) Many, many incipient cases of toxic goiter are whipped up and changed into serious cases by the obesity cures which contain thyroid extract. Also many instances of Graves's disease are directly traceable to thyroid drugging. (3) Too much surgery is done in cases of exophthalmic goiter. The fault does not lie with the surgeons; they have acted in good faith and have perfected their skill, much to their credit. But the lowered operative mortality rate and even the speedy *operative* recovery, laudable as this may be, do not constitute cure of the disease itself. The patient rightly expects complete recovery from the disease, with permanent perfect restoration to health which operation as a rule does not offer. Internists should get together and study the subject with a view to perfecting the management of exophthalmic goiter. When this is done, surgeons, recognizing the inefficiency of operative procedures and the success with nonoperative methods, will refuse to operate in these cases.

Granuloma Inguinale.—The organism studied microscopically by James C. Sargent, Milwaukee (*Journal A. M. A.*, April 30, 1927), in this case was found to be a nonmotile, nonspore-forming, noncapsule-producing, gram-negative bacillus, with a suggestion of formation of polar bodies. Three male guinea pigs were inoculated with the organism on the scarified glans penis, and after nine weeks pathologic changes were not noted.

Traumatism of the Nervous System in Children*

TRAUMATISM AND ITS EFFECTS ON THE NORMAL DEVELOPMENT OF THE NERVOUS SYSTEM IN CHILDREN

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The review of 160 clinical cases of trauma to the central nervous system is the basis of this brief discussion. These cases were collected from the hospital records of the St. Francis Hospital and the Children's hospital, Pittsburgh, Pa., and from my private patients. Four spinal cases were seen with Dr. David Silver, and with his permission are included in this report. Seventy-four of these patients were mentally defective and required institutional care (21 idiots, 35 imbeciles, and 18 morons). Twenty-six were slow in their school work. Of the remainder, no record was made of their mental condition. The patients with spinal injury were normal mentally. Sixty-four patients had epileptic attacks, 40 lacked the power of articulate speech, and 39 were unable to walk.

That trauma to the nervous system is an important factor in preventing normal development of the central nervous system is admitted by all. While the causes of injury are many, I have selected the cases that are commonly seen in hospital, dispensary, and private practice: (a) cerebral birth injuries; (b) injuries to the brain and cord resulting from breech delivery; and (c) injuries to the brain resulting from falls and automobile accidents. Attention is called to these cases because they illustrate the late results (the average age at the time of examination was six and one-half years).

CEREBRAL BIRTH INJURIES

Better to understand the early symptoms and late results of cerebral birth injuries, we should keep in mind the undeveloped state of the brain and skull at the time of birth.

At term, Ford[4] states, "the cortex and its projecting tracts are still partially unmedullated and hence, it is generally assumed, are not functional. The pyramidal tracts do not become completely medullated until somewhere between the ninth and twenty-four month of extra-uterine life. There is evidence that medullation of the various association tracts in the cortex continues for many years after birth."

Where the hemorrhage has been extensive, the

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following symptoms may be noted: Convulsions, deep or pallid asphyxia, disturbance of respiration, irritable or slow pulse, muscular twitching, retraction of the head, bulging of the fontanelles, changes in the retina, unequal pupils, inability to nurse, and free blood in the spinal fluid. In late cases the following symptoms are often noted: Inability of the child to sit up, slowness in learning to walk and talk, slowness in learning personal cleanliness, athetoid movements, various degrees of monoplegia, hemiplegia, and double hemiplegia, absence of motor coördination, and retardation of mental development. It is not uncommon to find histories of cases where the symptoms, if present early in life, were unrecognized and were appreciated only after the child had shown inability to do his school work.

Where the hemorrhage is small or in the silent areas of the brain, clinical symptoms may be difficult to elicit, but the apparent absence of symptoms does not mean that the normal development of the central nervous system will take place. The lack of development of the association tracts or the speech centers are the main factors in the cases that present inability to talk. Lack of muscular coördination is the factor in the case of many who are unable to walk. I refer to that particular group of cases where the physical deformity or muscular weakness is not sufficient in itself to prevent walking.

Epileptic Attacks

The occurrence of convulsions in the first few months of life should always be considered of diagnostic importance, and usually means intracranial hemorrhage. In reviewing the 64 cases presenting epileptic attacks, the histories were found defective in many important points. Difficult labor was reported in 14 cases, forceps delivery in 8 cases, and prematurity in 5 cases. In 6 cases the convulsions at first were Jacksonian in character, in 5 the convulsions appeared, one on the first day, one on the second day, two on the third day, and one on the fourth day of extrauterine life. It is my opinion that many cases of epilepsy described as "essential" epilepsy are caused by birth trauma. If the lesion is present, acute infections, stimulating drinks, irritating foods, and gastro-intestinal disorders may act as exciting factors in causing the convulsive attacks. This is well illustrated by the experimental work of Drs. W. E. Dandy and R. Elman,[3] who produced convulsions in cats by oral administration of absinth after lesions were produced in various portions of the brain. Their conclusions were striking, and demonstrated that 1/3 to 1/7 of a dose of absinth required to produce convulsions in normal cats will incite attacks when the motor cortex has been injured several weeks previously.

Case 1.—L. H. W., aged 5 years. Difficult labor, no instruments used. Considerable effort required to establish regular breathing. Convulsions, Jacksonian in character, involving the left arm and leg. First attack occurred when child was one day old. On the fifth day operation was performed and clotted blood removed.

Examination at the age of five years. Patient had left-sided hemiplegia, with contractures and athetoid movements of the left hand. She had been free from convulsions for four years, but during the past year had had attacks occurring at irregular intervals. The child had a microcephalic skull, circumference 15½ inches. Mentally she was an imbecile, and required institutional care.

This case illustrates the epileptic type, with lack of brain development due to birth injury, and suggests that we must be careful in our prognosis, with or without surgical intervention.

Case 2.—R. W., aged 7 months. Long labor, first child. No instruments used. Drooping of the left eyelid noticed since birth. For the first six months, the mother noticed a rapid enlargement of the head. No history of any other illness of the child, and the health of the mother was good during pregnancy.

Examination: the head circumference was 18½ inches, fontanelles bulging, all reflexes increased. There was drooping of the left eyelid, divergent strabismus, pupil of left eye larger than right. Wassermann tests of the child and mother negative. During his stay in the hospital, the patient had a convulsion. Diagnosis: (a) internal hydrocephalus; (b) palsy of the third nerve.

Reëxamination September 14, 1926. Child was then 9 years old. A few years after his discharge from the hospital there had been a gradual improvement in the paralysis of the third nerve. During this period, the rapid enlargement of the head ceased.

The child was slow in learning to walk and talk. At the age of three an exploratory operation on the right side of the head was performed. Investigation at that time revealed that the cerebrospinal circulation had been reëstablished.

The convulsive attacks had increased in frequency and severity. He never was able to do regular school work, and could no longer continue in the special classes.

The absence of any history of meningitis or illness of the mother during gestation, and the third-nerve involvement, which improved with the reëstablishment of the cerebrospinal circulation, lead one to believe that this was a case of internal hydrocephalus, the result of birth trauma and hemorrhage.

Pathologic Anatomy

The pathologic anatomy of injuries to the nervous system is too extensive to be included in this paper. The frequency of birth injury is indicated by Ford[5] in his collection of published autopsy findings in the stillborn. They show intracranial hemorrhage present in about 37 per cent.

The mechanical causes of cerebral birth injuries are well understood, but there is still considerable difference of opinion about many of the contributing factors. In prematurity, we have most of the mechanical factors of a full-

term delivery plus the poorly developed bony protection of the brain and meninges. That this is important is shown by Schwartz, who found that animals whose skulls are solid do not suffer intracranial birth injuries, and Ylppö[7] has proved that the cutaneous blood vessels of premature babies are abnormally fragile. He reports injury of some degree in 90 per cent of premature infants, and states that of the premature infants who survive, 7 per cent are mentally defective or develop spastic paralysis.

Recognizing the dangers of cerebral birth injuries to premature infants, we should be extremely careful in recommending premature delivery. We should weigh carefully the benefits to be derived, both to the mother and child, before subjecting the child to the hazards of this procedure.

The importance of prolonged coagulation time of the blood is still a problem demanding additional investigation. Unless prolonged coagulation is always associated with weakened blood vessels, this disease is not a cause of hemorrhage. True, the hemorrhage will be larger than it would be if the blood were normal, but this factor enters the case only after the trauma has taken place. There would, naturally, be a tendency for the blood to diffuse in the cerebrospinal fluid, and diffused blood may do less damage than a small organized clot. We should examine the blood in children where intracranial hemorrhage is suspected, before doing a spinal puncture for the purpose of diagnosis or for treatment.

Asphyxia is a cause of intracranial hemorrhage. Asphyxia causes most of the deaths in breech delivery by trauma to the cord, premature detachment of the placenta, or delays in delivery of the head. But we are mostly concerned with asphyxia caused by compression of the head in forceps delivery and long, protracted labor. Asphyxia is also a symptom of cerebral birth injury, and it is difficult at times to determine which is the cause and which is the effect.

Prognosis

Children suffering from trauma to the nervous system present many problems that may be classified in special groups for study, but no two children are alike, each demanding individual investigation until the nature, location, and degree of the injury has been determined. In the early stages the prognosis is difficult. A child presenting focal symptoms of a grave nature may clear up in a few days, while another without early symptoms may later show motor defects and marked mental retardation. When the late results are seen, the prognosis is not so difficult, and the benefit to be derived from the known remedial agencies and appropriate methods of training can be more definitely estimated. Special methods of training should be instituted early, for the most progress is made during the first fifteen years.

When the spastic condition is complicated by lack of motor coördination, the prognosis is unfavorable. In the majority of cases the child will never be able to walk. The correction of the deformity will help in our efforts to develop better muscular coördination, but unless the child is able to make some effort at walking, in spite of his deformity, the correction of the deformity will not be sufficient. In premature infants the prognosis is less favorable than in the full-term child.

Treatment

A knowledge of the cause of intracranial injuries that will reduce the frequency of their occurrence is greatly to be desired.

After the damage has been done we are limited in the things that we can do for the child. Often, remedial agencies fall far short of our expectations. Great benefit has resulted from orthopedic measures, but this form of treatment is directed largely to the correction of motor defects. This treatment has added to the patients' comfort, increased their usefulness, enlarged their field of activity, and enabled many to receive their mental training in the public schools.

Special mental and physical training offers much. The possibilities are only partly understood, and additional investigation along this line may lead us to better methods of teaching, not only for the mentally crippled child but for the normal child as well.

Lumbar puncture, as a method of treatment, is still in the experimental stage. The withdrawal of free blood in the spinal fluid may be helpful. It is a valuable procedure when a reduction of the intracranial pressure is indicated.

If the hemorrhage is localizable, surgical methods are indicated to control the bleeding and remove the clotted blood. In the late cases where cysts are found, benefit has resulted from surgical treatment. The cases of chronic meningo-encephalitis, and those in which sclerosis or atrophy have developed are not greatly benefited by surgical methods.

Injuries to the Brain and Cord Resulting from Breech Delivery

In breech delivery the imperfect preparation of the soft parts may cause delay in the passage of the head through the birth canal. Greenwood[2] has demonstrated that in breech extraction the vertical diameter of the head is always increased, and Crothers[1] has shown that this method of

delivery imposes a great strain on the tentorium. Any skull molding necessary to allow the head to pass through the birth canal must take place in breech extraction as well as in head presentation. The molding must take place rapidly, thus increasing the dangers of trauma. During the delivery of the body, blood is forced to the brain in abnormal amounts, often causing hemorrhage. If you add to these dangers the causes that produce asphyxia, and injuries to the spinal column and cord, we shall have sufficient evidence to condemn version and extraction as a method of choice in the delivery of normal cases. In one breech-delivery case, the x-ray examination demonstrated a fracture of the spinal column with marked deformity in the lower lumbar region. This injury caused traumatic myelitis, involving the upper sacral and the lower lumbar portions of the cord. Ford[6] has recently published a report of six cases of spinal-cord injury, and has reviewed the literature of this important subject. Since this report was written, case 2 died, but no autopsy was obtained.

Case 3.—J. B., female, aged 1 year; breech extraction, very hard delivery; premature child, estimated at eight months, weighing about four pounds. The child had been apparently healthy since birth, except for paralysis of the legs. She was well nourished and well developed, except the lower limbs, cried vigorously, making active movements with all parts of the body except the lower limbs. She took her feeding well, but was constipated a large part of the time. There was no distention of the bladder. There was present flaccid paralysis of both lower limbs, lost reflexes, no response to pin prick. Legs rotated outward, right foot in position of talipes equinovarus; bones and joints normal. There was some movement of the hip muscles.

The child was growing rapidly and mentally was apparently normal. There were no symptoms of brain injury. X-ray examination demonstrated a fracture of the spinal column with marked deformity of the lower lumbar region. The picture showed some callus present. There was no evidence of spina bifida or defective development of the spinal column. There was present a traumatic myelitis, involving the lower lumbar and upper sacral portions of the spinal cord.

Case 4.—J. F., female, aged 14 days. Face presentation, difficult labor, delivery by version and extraction; not a difficult version and no undue traction used. On the second day it was noted that the child could not move the left leg. On the third day both legs were paralyzed. There was partial paralysis of the left arm, lasting for two days. Sensation was apparently lost in both legs. Unable to urinate for first two weeks. Left arm weaker than right. Child well developed, cranial nerves not involved. X-ray of spine negative.

It seems likely that the injury was hemorrhage in the cervical enlargement of the cord.

Case 5.—R. A. C., aged 13 months. Breech extraction. Spinal cord injured in lumbar region, causing paralysis of right leg. History of long labor terminated by manual extraction. Paralysis of right leg was noticed shortly after birth. Bladder weakness was noted the first few weeks, and bowels were markedly constipated. Sensation diminished; pricking with pin scarcely noticed.

Examination revealed: Knee, tendo-achillis, and plantar reflexes lost in right leg. Right leg smaller than left. The child was alert and seemed normal, was well developed except the right leg. The cranial nerves were normal. No injuries to the spine could be demonstrated.

Case 6.—G. P., male, aged 10 years. Leg presentation, severe traction used on the legs during delivery. Child never able to use legs. First seen at dispensary, Children's Hospital, August 31, 1917. Flaccid paralysis of both legs, loss of control of bowels and bladder, sensation to pain lost. This patient was admitted to the hospital in March, 1919. At this time there was some return of motion and sensation. The child had a dislocated left hip, with double talipes equinovarus.

Appropriate orthopedic measures were used, and in 1922 he was able to walk with crutches and braces. At the present time there is a lack of development of the legs, and he has never regained normal control of his bladder. Mentally, he is exceptionally bright. The x-ray demonstrates a normal spinal column. The damage is limited to the lower lumbar and sacral segments of the spinal cord.

Case 7.—Spinal column and cord injured by method of resuscitation used. L. R., male, 3 years old. Head presentation. Attending physician had considerable trouble getting the child to breathe. Active manipulation of the body used while the child was held by the legs. This was continued for several minutes. Mother stated that the child never had the use of his legs.

On examination, a marked angulation of the spinal column was seen at the tenth and eleventh dorsal vertebræ. The child was poorly developed below the site of injury. There was partial paralysis present in both legs, sensation diminished in the right leg but not lost. Mentally, this child was normal, and he had normal use of his arms and the upper part of his body. The x-ray examination showed angulation of the spinal column at the tenth dorsal. The lateral view showed fracture of the tenth vertebra. Clinically, the case was one of spinal injury at the site of fracture, the fracture possibly being produced by the method of resuscitation used.

Injuries to the Brain Resulting from Falls

Falls causing head injuries do not receive the consideration that their importance demands. When a history of head injury is given, this factor demands careful consideration. It is true that the parents of defective children are prone to attribute the mental defect to head injuries received in early life, and this should be kept in mind during the examination.

In the study of this phase 26 cases giving a history of head injuries from falls were x-rayed. The examination revealed old fractures in 4 cases. There were no clinical symptoms of severe brain trauma at the time of the accident, and the period of unconsciousness did not give a true index to the amount of damage done. These cases should not be given a separate classification, as the same type and degree of injury may be produced by other accidents.

CASE 8.—T. C., male, aged 2 years, 5 months. Admitted May 2, 1924. Normal delivery and normal health for the first six months. At the age of six months, he fell down stairs, striking the floor with his head. There was a large swelling on the right side of head. The left side of body was paralyzed. Patient had convulsive attacks for four successive days. The paralysis of the left side of body remained complete for one year, then gradually cleared up. Child had never talked, but seemed to understand, was obedient, and had been very active in his play. There was no further trouble until the morning of his admission, when the child appeared feverish, fretful, and vomited several times. This was followed by a convulsive seizure confined to the left side of the body. Convulsions recurred at short intervals until his admission at 1 p.m.

Examination on admission: Child well developed and well nourished, but in a semicomatose state. Pupils fixed and eyes deviated to the right; no nystagmus. Ophthalmoscopic examination: media clear, optic disks clearly seen; no neuritis. In the right parietal region there was a definite protrusion, about one inch in diameter; this was devoid of bone and apparently pulsating. Convulsive movements of the left leg and arm. Reflexes were markedly exaggerated. Ankle clonus and Babinski sign present in left leg. Right side normal.

Diagnosis, cyst; operation recommended. The operation was performed by Dr. W. B. Hetzel, and the following pathology was found at operation: Irregular oval loss of substance of skull in right parietal region. Under this area was found a double cyst, each half about one inch in diameter. Whole condition apparently epidural.

This case is interesting on account of the bone absorption over the cyst as well as the damage to the brain. The question arises, "Did this child's paralysis gradually improve only after nature had performed decompression?"

Discharged June 28, 1924. General condition good, wound healed, pulsation felt over cranial defect, walked and played, left arm still spastic. No convulsion since operation.

CASE 9.—F. J., male, aged 3 years, 6 months. Admitted to the Children's Hospital, October 10, 1919. Fell from a bridge about twenty feet high, striking his head on a rock pile. Child was in a semicomatose condition, and was bleeding from a deep laceration in the scalp just to the right of the midline.

During an attempt to control the hemorrhage, lacerated brain tissue was found to be protruding from the wound. Further examination revealed inability to close the left eye, marked external strabismus of right eye, pupils reacted to light sluggishly. There was apparent inactivity of the left arm, while the right was active and held at site of contusion, left leg drawn up. During examination the child regained consciousness.

October 11, 1919, patient vomited twice. Loss of movement in left arm and leg more noticeable. Patient very drowsy. At times he cried out as if in great pain. Examination under ether anesthesia revealed a bursting fracture of the skull about four inches in length, involving the temporal and occipital bones. Fracture line was tortuous. Considerable brain substance came out of the opening. October 12, patient unimproved, temperature 102°, pulse 130. In semicomatose state, cried out at frequent intervals. October 13, temperature, pulse and respiration had fallen, patient brighter and recognized those about him. Took nourishment well. October 19, used right hand and leg. Left arm still paralyzed; some movement in left leg.

There was a rapid improvement, and on October 27 the patient could stand and was able to walk when holding on to something. November 3, patient in splendid condition, up and around most of the day, scalp wound healed, slightly clumsy gait. Good return of function in left arm and leg, strength of left hand only slightly less than that of the right. Patient was bright and cheerful. November 16, discharged, improved.

CASE 10.—M. V. G., aged 12 years, fell from a wall a distance of approximately ten feet, striking her head. The scalp was not cut and there were no clinical symptoms of severe head injury. The child was dazed for a few minutes, but was able to walk home and play with the other children the rest of the day. The following day she complained of headache. The pain in her head was most severe in the occipital region. The headache continued for several days, but was not severe enough to confine her to the house. The x-ray examination revealed an extensive fracture of the occipital bone.

Two months after the accident the patient had headache, but the pain was diminished in severity. There was some dizziness present during active exercise. There were no visual symptoms present. The cerebellum did not seem to be involved.

INJURIES TO THE BRAIN RESULTING FROM AUTOMOBILE ACCIDENTS

Those connected with hospitals and dispensaries are greatly distressed by the ever-increasing number of head injuries resulting from automobile accidents. This increase is due to the greater number of automobiles in use, the reckless manner in which many are driven, and to the carelessness of the children in crossing or playing on the streets. These facts are well known, but little has been accomplished in preventing these accidents.

CASE 11.—C. M., male, aged 9 years. August 12, 1924, struck by automobile and head injured. He had a compound fracture of the skull involving the right temporal and parietal bones. There was terrific shock but no paralysis, and the child was not unconscious. There was much laceration of the scalp, skull, and meninges. Hemorrhage was controlled, and some of the bone was removed, a piece of bone about the size of a silver dollar remained attached to the scalp. The child had a convalescence comparable to a scalp wound, and could not be confined after two weeks. At this time his temperature was normal and he was allowed to go home.

One week later he was examined by Dr. R. Entwisle at his office. At that time he had a temperature of 102°, and there was a slight bulging of the scalp at the seat of the injury. He was admitted to the Children's Hospital, September 2, 1924. There was present a well-marked hernia cerebri, temperature 103°, delirium, and stiffness of the neck. The scalp plot was opened, and about one ounce of pus removed. Spinal fluid was under pressure, clear, cell count 55, but no bacteria were recovered. There was some improvement for a few days, but the temperature continued and the hernia increased in size.

Six weeks after his admission, he developed paralysis of the left arm and leg and left side of face. An abscess was located and drained—culture, Staphylococcus albus. There was a gradual improvement following

the operation, and the hernia decreased in size. Three months later the hernia had greatly decreased, and there was a marked improvement in his general condition. The paralysis of leg and face had practically disappeared. Paralysis of the arm was still present but improving.

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ORTHOPEDIC TREATMENT OF CEREBRAL SPASTIC PARALYSIS

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These patients are among the chief sufferers from the "nothing can be done" and the "wait till they are older" complexes which still influence the profession as well as the laity. The parents feel that they are neglected, and fall easy prey to the numerous quacks who are eager to enrich themselves at their expense. As early as possible the patients should be put on a régime that not only allows the maximum improvement but allays the fears of the parents and reduces to a minimum the inevitable migrations that sooner or later all of them make.

The symptoms which are mainly responsible for their disability are loss of muscle control, spasticity, contractures, and muscle unbalance. All these symptoms are made worse when movements are attempted. The loss of control and spasticity is general, and from the beginning there is a tendency to improvement. However, approximation of the origin and insertion of certain groups over long periods increases the spasticity of these groups and weakens the opposing groups, thus increasing the muscle unbalance and favoring the development of contractures. The typical contractures seen in these cases are in keeping with the constantly assumed position in bed and in sitting.

In the arm we have adduction of the shoulder, flexion of the elbow, pronation of the forearm, and flexion of the wrist and fingers. In the leg we have flexion and adduction of the hips, flexion of the knee, and plantar flexion of the ankle. These contractures are spastic in the beginning and can be overcome, but they eventually lead to actual shortening of the tendons—the atrophic contractures of Stoffel.[1] They limit the motion of joints in the one direction, thus interfering with function, and in the legs they often prevent the assumption of the upright position for walking.

The treatment naturally divides itself into two stages: (1) that during the first four or five years of life, in which spontaneous improvement occurs as a result of the child's efforts to use the muscles; and (2) that after all the improvement which will occur has already taken place, and further improvement depends on the reduction of spasticity and muscle unbalance by some operative procedure.

The First Stage

During the first stage there is a gradual spontaneous improvement brought about by voluntary efforts to use the muscles. The amount of improvement varies with the original damage to the brain and the treatment. Of course, none of these patients can be restored to normal, but each should be assured of his own maximum improvement by proper treatment.

The prevention of spastic contractures, if possible, is of the first importance. Muscle unbalance, which already exists to a certain degree, is increased by the development of contractures. There is a gradual increase in the power of the spastic group of muscles and a corresponding increase in the weakness of the antagonistic group. The constant assumption of one position, which favors the development of contractures, should be avoided. The joints should be passively moved through their complete arc of motion several times a day. In addition, splints should be worn, especially at night, with the joints held in the opposite position to the favored one. Thus the hips should be abducted, the knees extended, and the ankles held at a right angle. In the upper extremity the shoulder should be held in abduction, the forearm supinated, and the wrist and fingers extended.

Muscle control and balance are improved by muscle training and the stimulation of purposive movements. Muscle training is, of course, directed toward the muscle groups opposing those that tend to overaction. It can be combined with the daily passive movements of the joints, during which the child should be encouraged to make efforts toward active motion in the same direction. It is timely to remark here that any given movement of a joint not only presupposes the active contraction of one group of muscles, but also the active relaxation of the opposing group. Muscle training carried out with the limbs immersed in a warm bath is of value, as it



Fig. 1. Showing adductor spasticity. Maximum abduction. Internal rotation of hips to separate feet and broaden base of support.

not only removes the weight of the limbs but also reduces the spasticity. This helps in the relaxation of the stronger spastic groups, and thus reduces the chief factor interfering with active movements.

The children should be assisted by their parents toward the development of normal coördinated muscle function. They are taught to sit, stand, and walk; and, by the use of toys, blocks, etc., the normal movements of the hands and arms are learned. At this stage a mechanical walker is helpful, as it prevents falls and gives the child courage to strike out for itself. A swimmer begins to improve his technic only when he becomes conscious of the fact that he can swim. Where one side only is involved, the restriction of the normal arm is advantageous, for the tendency is to use only this arm when such a procedure is possible.

The question of fatigue must be considered in these cases. They should not be exercised too long or at too frequent intervals, and efforts at walking should not be continued over long periods without rest. When fatigue supervenes, there is a tendency to increase spasticity which has a deleterious effect on the patient. Exercises and walking should be started slowly and graduated to suit the strength and progress of the individual.

The Second Stage

During the second stage, the treatment consists of operative measures directed toward improving muscle balance and reducing spasticity so that further improvement can be secured by the same methods pursued during the first stage.

In deciding on operative treatment, the mental as well as the physical condition of the patient must be considered. Here collaboration between the neurologist and the orthopedist is essential. Of course, no one advocates operating on hopeless idiots; but on the other hand, no child should be denied a chance for improvement. It should be borne in mind, especially in borderline cases, that their restricted environment, due to physical disability, is often an important factor in their mental retardation.

The most commonly used operative methods are: (1) tenotomy, (2) tendon transplantation, and (3) nerve section (Stoffel operation,[1] and Royle and Hunter operation[2]).

Tenotomy

Where there is an actual anatomic contracture present, tendon lengthening is always necessary. This procedure has been used for many years with good results, especially on the tendo achillis and adductors. In addition to removing contractures, it reduces spasticity to a certain extent and allows improvement in muscle balance. In many of the milder cases this is all that is necessary. In any case, it should be done as a preliminary operation where anatomic contractures are present, in order to avoid the danger of overweakening the strong group by neurectomy.

Tendon Transplantation

The effort to improve muscle balance by strengthening the weaker group by tendon trans-



Fig. 2. Nine weeks after neurectomy of obturator nerve. Showing increase of voluntary abduction.



Fig. 3. Right hemiplegia. Showing spastic contractures of the hamstrings and tendo achillis.

plantation is of value in some cases. In the arm, reinforcement of the extensors of the wrist, fingers, and thumb by transplantation of muscles of the flexor group has given good results. In the leg, reinforcement of the dorsiflexors of the ankle by fixation of the extensors of the toes to the tarsals or metatarsals has been effective. In cases of long-standing deformities of the foot, with bony changes, it is often necessary to combine tendon transplantation with arthrodesis, especially at the mediotarsal joint.

Nerve Section

Royle and Hunter[2] section the gray rami of the sympathetic nerves, with the object of removing spasticity and allowing the patient to utilize the voluntary control remaining to its fullest extent. We have no personal experience with this operation. According to the authors, it has a limited application and the experience of various workers does not agree as to its results. It is a difficult operation which cannot be carried out by the average surgeon, and will thus be limited in its scope.

Stoffel's[2] operation consists of a partial resection of the nerve tract to the stronger spastic muscle groups. It produces a flaccid paralysis of parts of the muscles. The aim is to weaken the stronger spastic group, so that, although their function is retained, they are no longer able to overpower the antagonists. This operation improves muscle balance, reduces the spasticity, and prevents the recurrence of contractures. The advantage of this operation is that it is short and rather easy to perform, once the anatomy of the nerves is mastered, and it is not shocking to the patient. It can be carried out by the average surgeon, and thus can be widely used. Care should be exercised not to overweaken the muscles, as further resection can be done later, while once overweakened, it can not be recalled. This is especially true in the plantar flexor group of the ankle, as a calcaneus is much more disabling than an equinus deformity.

In overaction of the adductors, the anterior branch of the obturator nerve is resected in the milder cases, and both the anterior and posterior branches in the severe cases. Even when both branches are resected, active adduction is possible by the use of other muscles not supplied by the obturator.

In overaction of the tendo achillis the branches of the internal popliteal nerve to the gastrocnemius are particularly or wholly divided. Dickson,[3] divides the branches of the soleus in preference to those of the gastrocnemius to offset the danger of back knee.

In overaction of the pronators and flexors of the wrist and fingers, the branches of the median nerve to these muscles are partially resected.

Following the Stoffel operation, treatment should be continued as in the first stage. Night splints should be worn, and carefully supervised muscle training given. In a few cases, braces are required for walking for a time, on account of marked weakness of the previously overstretched knee-extensor group.

We have done the Stoffel operation on 33 patients. These included weakening of the adductors three times, of the hamstring four times,



Fig. 4. Right hemiplegia. Three months after partial neurectomy of the hamstrings and gastrocnemius.

of the gastrocnemius twenty-five times, and of the pronators and wrist flexors four times. In all the cases some improvement was secured, and none were made worse. In one case a calcaneus developed which required further treatment. The results in the arm cases were good as to appearance, but functional improvement was disappointing. This is not surprising in view of the coördination necessary in the normal function of the hand as compared with that of the lower extremity. In most cases a general improvement followed the lessened physical disability.

7133 Jenkins Arcade.

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ABSTRACT OF DISCUSSION

On Papers of Drs. Henninger and Markell

A MEMBER: Dr. Henninger remarked that a large number of injuries to the cerebrum result in mental defect. No doubt a large number of the children who come to our institutions for the mentally defective are there as the result of injuries at birth, during childhood, or possibly while *in utero*. Many of the defectives in our institutions are classified only as to the degree of mental defect, but more careful study is being made, and we hope that this large number will be broken up into smaller groups, and that we can give more careful attention to the etiology, pathology, and treatment. Many cerebral spastic palsies are associated with mental defects, and of course little can be done with the lower group, although the orthopedic surgeon can do a great deal for children of the higher group of mental defectives.

HORACE H. JENKS, M.D. (Philadelphia, Pa.): I should like to ask Dr. Henninger as to his experience with cerebral hemorrhage at birth which causes difficulty in swallowing in newborn children. What is to be done for a child who seems to be unable to suck, yet no pathologic condition is discernible on laryngological examination or x-ray study?

DR. HENNINGER (in closing): Difficulty in nursing is one of the early symptoms of mental deficiency, and is often seen in cerebral birth injuries. For children that are slow in learning to nurse or swallow, some method of special feeding should be used. Milk dropped into the mouth or through the nose with a medicine dropper is often all that is necessary. Careful feeding with a spoon or bottle, or in extreme cases a stomach tube, can be used.

As to the value of spinal puncture in the treatment of intracranial hemorrhage, I would say that spinal puncture is indicated when the hemorrhage has greatly increased the intracranial pressure. In case of an organized clot, spinal puncture will not be of value in removing the blood. The danger of free blood in the spinal fluid is not clearly understood. We do know that it disappears in a few weeks. Some favorable results have been reported following removal of bloody spinal fluid by repeated spinal puncture.

Case Reports*

TREMOR OF THE DIAPHRAGM

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When the patient whose case is herein reported presented herself in my office, I soon realized that her complaint was unique in my experience. She complained of a "jerking or beating in the stomach," and I could see that her upper abdomen was shaken by some regularly intermittent impulse. This was more apparent to the hand placed on her abdomen. The impulses were much more rapid than the heart beat, and there was no apparent contraction of the abdominal muscles—which excluded all possible sources of the movement with the exception of the diaphragm.

The patient is an unmarried woman, aged 42, her family history is good, and her past medical history contains nothing significant except a sickness of two years at the age of twenty-five, marked by loss of weight, cough, and spitting of blood. A diagnosis of pulmonary tuberculosis was made, she was given rest treatment, and made a good recovery. The peculiar movement in her abdomen began abruptly in June, 1916, and has been always present since that time. It continues during sleep. She thinks that it is worse sometimes than others, at least it then occupies a more prominent place in her consciousness. She has some shortness of breath on exertion, and the movement is then more marked. The only subjective symptom, in addition to the constant jerking, is an aching feeling over the costal insertion of the left leaflet of the diaphragm.

Physical examination, with special attention to the neurologic aspects, was negative except for a very moderate increase in density of the right upper lobe, and for the abnormal movement of her upper abdomen and lower thorax, which is more marked on the left side. Urinalysis and blood counts were normal, and the blood Wassermann was negative. She is 5 ft. 5 in. tall, and weighs 130 pounds; her blood pressure is 134/80. Her mentality is apparently about the average, her emotional make-up seems to be normal, and her reaction to her chief complaint is normal. She has received benefit subjectively from luminal, which was given to her by Dr. John Sturgeon, Jr., through whose courtesy I have been able to study this case.

Fluoroscopic observation of the chest has been very interesting. The lungs show rather marked

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hilus shadows and some increase in density in the right upper lobe. The heart and aorta are apparently normal. The diaphragm in its general outline and in its functional contraction is normal, but there are additional contractions which cause the movement noted by the patient. These may best be described as a tremor, having an excursion of about one-half centimeter.

The tremor begins with the descent of the diaphragm, seems to be somewhat augmented with the progress of the descent, and stops entirely when full contraction is attained. Very little of the movement is seen during the return of the diaphragm to the domed position. The movement is much more marked on the left side, and it is possible that the tremor seen on the right side is purely secondary. It has been impossible to determine with any exactness, the rate of movement, but it is probably at least 200 contractions to the minute during the inspiratory phase.

In determining the nature of this unusual condition I have been able to find little help in the medical literature available. In my opinion it is probably of encephalitic origin. As it started in 1916, one must assume that encephalitis occurred then but was not recognized. If encephalitis is excluded, this case might be put in the group of myoclonic conditions described by Friedreich.

HEMORRHAGIC PANCREATITIS

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Hemorrhagic pancreatitis is a catastrophy which requires immediate surgical intervention, and even though it may be prompt, the final result is almost invariably fatal. The patient frequently gives a history of gall-bladder attacks of moderate severity prior to the onset. It is believed that a small stone occludes the orifice of the ampulla of Vater, turning the bile into the duct of Wirsung, and by the action of the bile salts activating the pancreatic enzymes to their full digestive power while still in the pancreas. The resultant damage is almost unbelievable unless it has been seen.

In working on this problem with Goodpasture, a number of dogs were injected. We found that as soon as the bile reaches the pancreatic tissue it immediately becomes edematous and hemorrhagic. A few hours later, fat necrosis develops around the proximal omentum, and when seen, is typical of this condition. If a dog's pancreas is autolyzed and extracted by alcohol and ether, a split nuclear protein is obtained somewhat similar in structure to guanylic acid. It is in all probability these partially broken-down nuclear proteins which produce such severe symptoms of intense intoxication.

This case is presented to bring out two important factors in the medical observation of surgical cases: (1) observation of fluid balance in cases of persistent vomiting; (2) intravenous therapy of saline solution and glucose.

Mrs. Alice M., aged 23, was admitted to the St. Mary Keller Hospital, December 3, 1923, in the condition described above. She gave a history of gallstone attacks one year before the present trouble. Her prostration had increased so rapidly since the onset eight hours before that an operation was performed as soon as she reached the hospital. Upon opening the abdomen, Dr. Berge found the typical areas of fatty necrosis, and the head of the pancreas hemorrhagic and edematous. The gall bladder was found to be distended and filled with small stones. Drains were inserted around the head of the pancreas, and one in the gall bladder after the stones were evacuated.

For the next few days the patient's condition was critical. She showed signs of marked prostration, with repeated vomiting. During the first week she retained very little by mouth. Fluids were given by proctoclysis. The drains in the incision discharged a bloody serum in increasing amounts.

After the first week her condition began to improve gradually. Although the vomiting continued from time to time, at the end of fourteen days she was able to be placed on a modified soft diet. Three weeks from the time of operation she was allowed out of bed for increasing periods of time. This improvement, however, was only short-lived.

On January 1st, almost a month after the operation, the patient began to lose ground rapidly. The vomiting increased in severity until she was unable to retain any fluids by mouth. The continued proctoclysis had brought on an irritated condition of the large bowel, so that it could no longer be tolerated. As the patient was badly dehydrated, she was given glucose and saline solution intravenously. This was repeated again on January 9th.

A consultation was called, and the following facts were brought out: For the last week vomiting had rapidly increased until the measured fluids taken by mouth were equal to the vomitus. The material brought up was invariably deeply bile-stained. During this period it was impossible to secure a bowel movement. The results of the enemas showed only a brownish coloring. There existed an ever-increasing fluid deficit, with the patient's strength rapidly failing. A diagnosis of intestinal obstruction was made. Her response to the previous intravenous glucose and saline solution had been so striking that another was given, and an operation was undertaken.

The patient was operated upon January 11th, under a local anesthetic, lasting two hours. Upon opening the abdomen, a mass of adhesions were found around the head of the pancreas, obstructing the duodenum. A gastrojejunostomy was performed. Before closing the abdomen the small bowel was examined. Two feet below the gastrojejunostomy a complete obstruction with angulation was found adherent to the mass of adhesions around the head of the pancreas. In order to overcome this obstruction, it was necessary to cut and suture the mesentery. Shortly after the

operation the patient became cold and the pulse almost imperceptible. Intravenous administration of glucose and saline solution brought the pulse back to good volume and 104 per minute.

For the next three days the patient was in a very critical condition. The vomiting changed in character. Instead of the continual vomiting of small amounts, the patient would bring up large amounts of vomitus often having a fecal odor. In spite of purgatives and enemas, no bowel movements were obtained. At the second consultation it was decided that the patient must have an obstruction, either near the cecum or at the hepatic flexture.

On January 13th a third operation was performed under local anesthesia, lasting one hour. Immediately before the operation the patient was given glucose and saline solution intravenously. She responded well, the pulse remaining around 100 during the entire operation. A lower-abdominal incision was made. We were all very much surprised to see a three-months'-pregnant uterus. When this woman entered the hospital she was nursing an eight-months'-old baby. The question immediately came up as to whether the vomiting could be a toxemia of pregnancy. This, however, left the inability to obtain a bowel movement unaccounted for, and as had been anticipated, a complete obstruction of the small bowel was found a foot and one half above the ileocecal junction. This time, before closing the abdomen, every inch of the small bowel was examined and found patent.

The next day the patient was given a purge, and milk-and-molasses enema. Fecal material was obtained. The vomiting quickly subsided, and her condition gradually improved. On January 21st, one week after the last operation, she was placed on a light diet. By January 27th she was allowed out of bed.

On February 2nd, two months after the onset of the acute pancreatitis, the patient suddenly developed acute abdominal pain and died.

The postmortem examination revealed general peritonitis. The digestive enzymes had broken through the adhesions walling off the head of the pancreas, and allowed the scattering of this necrotic material throughout the abdomen. The fetus did not show any maceration.

MULTIPLE FOCAL INFECTION AND A COMPLETE MEDICAL SURVEY IN RELATION THERETO

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PHILADELPHIA, PA.

The following abridged case history is presented because it exemplifies certain features which I regard as important in the investigation of the causal relation between foci of infection and systemic disease:

Mr. H. S., aged 48 years, was first seen July 10, 1923, on account of recurrent attacks of multiple arthritis existing for approximately ten years. Syphilis had been contracted nineteen years before and adequately treated. In 1916 a partial tonsillectomy was done in an effort to relieve his arthritis.

Examination disclosed involvement of both feet and of the right sacro-iliac region; a negative Wassermann; the mouth in poor condition; incompletely removed tonsils, surrounded by acutely inflamed pillars; tenderness in the gall-bladder region; and the x-ray revealed a number of apical abscesses. Extraction of the involved teeth was recommended but refused.

March 31, 1924, an acute alveolar abscess prostrated the patient. The condition of the teeth was again discussed and extraction refused. The arthritis still continued.

June 12th, an acute digestive disturbance occurred, with anorexia and vomiting lasting two days. There was moderate epigastric pain. There was nothing particular in his previous history or in the present attack to suggest acute appendicitis or gall-bladder disease.

On November 30th, an acute attack of arthritis involved the right knee and both feet. The patient then agreed to the removal of five definitely abscessed teeth. This was followed by prompt but temporary relief.

On December 30th, both extremities, including the right hip joint, became involved. During the following three months only partial relief was obtained by various methods of treatment, including the intravenous injection of sodium salicylate, sodium iodid, and colchicin. Tonsillectomy was performed December 31st, with prompt but temporary relief.

Six weeks later an acute exacerbation involved all four extremities. Further study at this time revealed a normal prostate. A gastro-intestinal x-ray showed one large stone in the gall-bladder and evidence of adhesions in the region of the appendix. A cholecystectomy and appendectomy were done. This was followed by a slow convalescence, with gradual and final complete recovery from the arthritis, which has not returned. His general physical condition is now, one and a half years later, better than for many years.

The point I wish to bring out is the ever-present danger of assuming that the first encountered focus of infection is the sole cause of the secondary manifestations, particularly when this focus of infection can be discovered and removed without great difficulty. This pitfall can be avoided only by insisting upon a complete medical survey of every case.

The report serves also to emphasize the necessity for persistent effort in locating every focus of infection, and the importance of their complete elimination before permanent and satisfactory results may be expected.

ABSTRACT OF DISCUSSION
On Foregoing Case Reports

Elliott B. Edie, M.D. (Uniontown, Pa.): I wish to ask Dr. Clark whether the carbon-dioxid combining power of the blood had been taken in his case. It seems that alkalosis must be considered, and the saline solution may have had something to do with combating the alkalosis.

George A. Clark, M.D. (Scranton, Pa.): The blood was not studied for carbon dioxid. Unfortunately, the patient had very poor veins, and her condition was so critical that whenever we attempted any intravenous work we stressed the importance of the marked dehydration, and gave glucose instead of carrying on laboratory investigations.

Francis A. Faught, M.D. (Philadelphia, Pa.): In consultation with Dr. G. J. Saxon, I saw such a patient as Dr. Edie described. I think she received complete relief by section of the phrenic nerve. The

patient was intensely emaciated, and had the tremor all the time, accompanied by a periodic jerk as though the diaphragm suddenly straightened out. This happened no matter what she did—waking or sleeping. The cause I do not know. Of course, some tremors are due to encephalitis.

O. H. PERRY PEPPER, M.D. (Philadelphia, Pa.): The patient referred to by Dr. Edie, whose case was reported by Dr. Muller and myself, was treated by a method said to give only temporary relief—freezing of the phrenic nerve. If the relief is only temporary it has certainly lasted a long time, for the patient is still relieved.

ROY R. SNOWDEN, M.D. (Pittsburgh, Pa.): Recently Dr. Hayden, of Kansas City, has definitely shown that certain types of protein intoxication, particularly that due to absorption from high intestinal obstruction and pneumococcic pneumonia, seem to be neutralized by salt in the blood. These patients have been shown to have a low salt content in the blood, and they have been markedly improved by the intravenous use of salt.

PNEUMOCOCCUS SEPTICEMIA

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PITTSBURGH, PA.

Mrs. A. M., a widow, aged 63, who did most of her own work as keeper of a rooming house, was seen first on January 2, 1925, at her home. She said she had had a cold in her head for several weeks, and could not get rid of it by home remedies. There had been a mucopurulent discharge from the nostrils, and at times pain in the right maxillary and frontal regions. She had been doing her work as usual, and did not appear ill. Her temperature was 98.3°, pulse 76, and aside from tenderness over the area of the frontal and maxillary sinuses, nothing of significance was noted. There had been no symptoms or signs of any pulmonary affection. A diagnosis of coryza and sinusitis was made. As to the history of past illnesses, she had had scarlet fever in her youth, influenza in 1918, and had not been subject to colds.

The next evening, after a relatively comfortable day, she had a severe chill, associated with no new symptoms or abnormal physical signs. Her temperature was 102.2°, pulse 110, respirations 20. The following morning, after a good night's rest, she felt better. The temperature was 98.3°, pulse 94, and respirations 16. No laboratory work was done, on account of her improvement, except a urinalysis, which was normal. On the evening of January 6th, the temperature remained normal, and she felt so much better she asked to be allowed to get out of bed.

On the morning of the 7th, five days after my first examination, her daughter noticed that she was not so well. She showed some drowsiness and occasional mental confusion, and vomited several times during the day. There was some fever, and free perspiration. No headache or new symptoms were complained of. On that afternoon there was another chill, followed by a temperature of 103.2°, pulse 124, and respirations 22. There were no abnormal physical signs revealed after a very thorough examination. Her condition became much worse, with increasing drowsiness, confusion, muttering, and restlessness which persisted during the night. When seen the following morning, there was slight rigidity of the neck and a suggestion of Kernig's sign. The tendon reflexes were markedly increased. With this evidence, a diagnosis of meningitis was made, and the patient removed to Mercy Hospital. We very soon heard also a loud, blowing, systolic murmur in the mitral area which was not observed at previous examinations. There were no abnormal signs over either lung. The blood pressure was 137/70.

The laboratory findings were as follows: *Urine*—dark amber; specific gravity 1.028; a trace of albumin; no sugar; and on microscopic examination, white blood corpuscles and a few granular casts. *Blood*—white blood corpuscles 32,000; polymorphonuclear neutrophils 86 per cent. *Spinal fluid*—under increased pressure, and very turbid; 900 cells, mostly polymorphonuclears; globulin, plus; culture showed pneumococcus, Type IV; direct smear showed Gram plus diplococci. *Blood culture*—after 24 hours showed Gram plus diplococci, later identified as pneumoccus Type IV.

A diagnosis of septicemia was made, based on the clinical evidence of severe toxemia, meningitis, and suspected acute endocarditis, and of pneumococcus septicemia shown by the laboratory reports of pneumococcus in the spinal fluid and the blood.

The patient became progressively worse, the delirium became total, restlessness and irritability were extreme, and there was evidence of pulmonary edema. The temperature ranged from 103° to 104°, the pulse from 130 to 160, and the respirations from 40 to 56. Rigidity of the neck and upper back was very marked. Kernig's sign was positive. There was evidence of severe pain in the head, but there were no convulsions or paralysis at any time. The pupils were equal, and reactions normal. Death occurred on the morning of January 11th, nine days after our original observations, and five days following onset of the final and more grave phase of the disease.

A complete autopsy was done, and the major significant findings were as follows: There was acute purulent meningitis over the brain and

cord. There was acute vegetative and ulcerative endocarditis, with perforation of the anterior leaflet of the mitral valve. There were no abscesses in any of the tissues or organs. The accessory sinuses did not contain pus, and there was no evidence of the infection traveling by continuity from them to the meninges, the probability being, therefore, that the meningitis was not primary, but that the pneumococcus entered the blood stream from the upper respiratory tract and secondarily produced the meningitis and endocarditis. There was no pneumonia.

This case is reported chiefly to illustrate the grave possibilities of a minor respiratory infection.

PYLORIC SYNDROME DUE TO AN EXTRAGASTRO-INTESTINAL LESION

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By the pyloric syndrome we mean pylorospasm, increased peristalsis, and hyperacidity. These, at least, are its most characteristic features. While its most common and most probable cause is ulcer, the case which forms the excuse for presenting this report shows that this same train of symptoms may be due to an extragastro-intestinal lesion.

The pyloric syndrome, as such, is decidedly a conception of modern medicine. The various gastralgias with which human kind have always been afflicted were formerly grouped under the convenient terms chronic dyspepsia, gastric catarrh, and the like. The differentiation from the pyloric and other syndromes has been made possible both by improved methods of clinical diagnosis and by the opportunity of observing the pathologic processes in their various stages as revealed on the operating table in the living human subjects. Clinically, the advance was introduced by the use of the stomach tube and the test meal, as well as by urinalysis, blood chemistry, and the like. Unfortunately, not all of us at all times take advantage of those modern diagnostic aids, and too often the convenient term of dyspepsia leads us into diagnostic pitfalls. These errors often occur because of the lack of accuracy in taking a history and the failure to make a thorough physical examination.

In the diagnosis of gastro-intestinal disease, as in every other disturbance, in fact, the clinical history is of the greatest importance. The greater one's experience in diagnosing gastro-intestinal derangement, the more one appreciates the value of a really complete history and its proper interpretation. It is a well-known fact that any pathologic condition within the abdomen may produce abnormal physiologic processes, but certain combinations of symptoms are more or less distinctive of extragastric and gastric lesions, respectively. It is, no doubt, a common experience to be misled by an apparently clear-cut history and a typical syndrome, only to find on more careful analysis and questioning that one or two points in the history and the syndrome should arouse a doubt as to the actual underlying cause of the complaints in a given case. An experience of this kind has seemed to me worthy of a report.

The patient, a well-nourished adult male aged 42 years, married, weight 176½ pounds, came under my observation on January 19, 1924. The chief complaint was pain, intermittent in character and more or less intense, with occasional exacerbations. The symptoms consisted of epigastric discomfort such as weight, pressure, fullness, bloating, belching of gas, and sour eructations. The discomfort began about one hour after each meal, and gradually increased in severity until a burning sensation was experienced, followed by a severe intermittent periodic pain. At no time was there a sense of early satiety. The pain was confined to the mid-epigastric region and did not radiate. It reached its height about three hours after each meal. At the height of his symptoms, vomiting, either induced or voluntary, would give him instant relief. Many times he was awakened about midnight wih pain and vomiting. Vomiting was not preceded by nausea or followed by wretching. Vomiting was distinctive in character in that it was projectile. The vomitus was always fluid, varying in quantity from 18 to 30 ounces, very sour, burning the mouth and lips, and putting the teeth on edge. At no time did he notice visible blood or bile. His appetite remained excellent, and he ate three large meals a day. The character of the food did not have any influence on the time or severity of his symptoms. He could ingest highly seasoned foods, condiments, and acid foods without any severity of symptoms. His bowels were regular, having one or two movements per day. He did not have soda or food relief. The greatest relief was experienced by folding his arms across the abdomen and bending over so as to make sharp pressure across the abdomen. Purgation had little or no effect on the symptoms. There was no history of rheumatic pain or joint disturbances, headaches, chills or fever, colic attacks, or seasonal exacerbations.

The history was strongly suggestive of pylorospasm or a benign stenosis, but what was the underlying cause? Was it a gastric or extragastric lesion?

A few points in the physical examination are of value. The patient was well-nourished, the skin clear, the teeth and tonsils negative, the tongue clean, and there was no bad taste in the mouth or bad breath. The chest and heart were negative. There was a slight rigidity in the mid-epigastrium region, but no soreness on pressure over the duodenal area or over the gall-bladder region. On deep pressure, a distinct soreness was felt, extending from the mid-epigastrium to the left side. This deep pressure produced a sickening feeling. Otherwise the physical examination of the abdomen was negative.

Gastric chemistry: The fasting stomach contained 12 ounces of a pale white fluid, free acidity 76, total acidity 94, no occult blood or bile present. The odor

was distinctive of a benign stenosis, which may be described as an aromatic sour pleasant odor—a condition contrary to the odor of the ordinary gastric contents. The test meal showed high acidity and continuous secretion; no blood or bile in contents. The stool was negative for occult blood.

Urinalysis: Specific gravity 1.030; albumin, acetone, diacetic acid, and indican, negative; no casts; 6½ per cent of sugar present.

The Wassermann and Kahn tests were negative. The blood sugar was 308 milligrams per 100 c.c.

A diagnosis of pancreatic inefficiency or diabetes with the above findings would be justifiable. The history is strongly suggestive of the most common cause of this syndrome, that is, ulcer; but with careful interpretation of the history and physical examination, ulcer can practically be ruled out.

The patient was put on a diet of protein 67 per cent, fat 78 per cent, carbohydrate 23 per cent, making a caloric value of 1,150 per day. After the first week the blood sugar dropped to 143 milligrams per 100 c.c., and the sugar in the urine to ½ of 1 per cent, and the weight to 160½ pounds. The gastro-intestinal symptoms had all subsided.

TOXIC NEPHRITIS TREATED BY RENAL DECAPSULATION

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Case 1. A man 24 years of age was admitted to the Chester Hospital on December 23, 1923, on the medical service of Dr. A. J. Simpson. He had swallowed two 7½-grain bichlorid-of-mercury tablets an hour before reaching the hospital. In the receiving ward his stomach was lavaged with 5-per-cent sodium bicarbonate, and egg-whites were given. Further treatment consisted of stimulants and external heat, and imperial drink 8 oz. and milk 8 oz. were taken alternately every two hours.

The patient was in a condition of shock on admission. His temperature was 96°, and his pulse rate 130. General physical examination revealed no other important findings. He soon began to vomit bloody mucus, became severely salivated, developed bloody diarrhea, and marked physical depression.

The second day after admission the urine showed a cloud of albumin, granular casts, and gross blood.

The urinary output, scanty from the first, was only 300 c.c. on the tenth day, despite a fluid intake of 2,500 c.c. At this time his nonprotein nitrogen was 250 mg., and his phenolsulphonephthalein output was only a trace in two hours. His legs and face were a little puffy, and he was very weak and toxic.

Using nitrous-oxid-and-oxygen anesthesia, both kidneys were decapsulated ten days after admission. He reacted very well, and the clinical improvement was remarkably rapid. The most noticable effect of the operation was the diuresis produced. The second day he passed 1,170 c.c. of urine, with a fluid intake of 1,920 c.c., and the third day 1,440 c.c. on an intake of 1,680 c.c. On the fifth day the nonprotein nitrogen was 144 mg. Nine days later it was 46 mg., and the phenolsulphonephthalein output was 38 per cent in two hours. He was discharged three weeks after the decapsulation in good physical condition. At present he is following his occupation as a truck driver. He has no demonstrable renal lesion.

Case 2. This patient, a housewife aged 39 years, also took two 7½ grain tablets of bichlorid of mercury, confusing them in the dark with aspirin. It was a half-hour later before burning in her throat and abdomen caused her to realize her mistake.

The treatment administered in this case was identical with that of case 1. She was in a condition of shock on admission, and the next day her urine showed gross blood, a cloud of albumin, and many granular casts. Severe vomiting, bloody diarrhea, and salivation, with marked prostration were also evident to the same degree as in case 1. On the sixth day her urinary output had decreased to 600 c.c. in 24 hours, with a fluid intake of 1,400 c.c. The blood urea nitrogen was 75 mg. per 100 c.c. The phenolsulphonephthalein output was 10 per cent in two hours. At this time bilateral renal decapsulation was done, using nitrous-oxid-and-oxygen anesthesia.

Her clinical improvement was also rapid. The urinary output increased, reaching 1,835 c.c. on the third day. The blood urea-nitrogen figures dropped to 49 mg. on the fifth day, and 19.5 mg. on the tenth day. The phenolsulphonephthalein was eliminated in a greater percentage, reaching 40 per cent in two hours on the fifteenth day. The urine still contained a faint trace of albumin but no casts when she was discharged 16 days after her operation. It was two months before she regained her former strength, but since then she has been in good health, and at present the urine is normal and she shows no evidence of disease.

In both cases it was noted at operation that the renal tissue was apparently under tension as the capsule was incised. The kidneys were rather dark in color and oozed freely.

Conflicting opinions as to the real value of this operation appear in the literature. As originally conceived by Edebohls[1] for the cure of chronic nephritis, it has been discarded by most men as useless. Many authorities believe, however, that decapsulation is a rational method of treatment in acute renal congestion, either of bacterial or toxic origin, contending that benefi-

cial results are derived from the relief of pressure within the unyielding capsule which interfers with blood circulation and urinary secretion.

Cabot[2] believes that it has been definitely established that attacks of renal congestion, whether medical or surgical, may be relieved by decapsulation or nephrotomy. He is also of the opinion that the operative shock may do more harm than the decapsulation does good. Keys[3] and Young[4] agree that the operation is useful in certain cases because of the diuresis it produces. Morton[5] considers decapsulation an emergency life-saving procedure in extreme oliguria. Quimby,[6] however, could see absolutely no benefit derived from the procedure in three reported cases, including one of bichlorid poisoning which ended fatally on the fifth day.

In the two cases herewith reported, the operation of bilateral renal decapsulation seemed to be responsible for prompt diuresis, lowering of the retained blood nitrogen, and rapid clinical improvement.

400 E. Thirteenth Street.

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DEEP X-RAY TREATMENT OF BRAIN TUMORS

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Case 1. The patient was a young man of 21, who became ill suddenly. This was preceded by loss of consciousness. He had severe pain in the head, mild hemiplegia of the left side of body, and hypesthesia on the left. In a few days he developed a choked disk, and later left homonymous hemianopsia.

A diagnosis of tumor was definitely established, and he was given deep x-ray treatment of the head. It was a massive dose. Two days after the treatment he commenced to show improvement, in that the astereognosis cleared up. He made a good recovery. We had no opportunity to examine him again, but he visited the hospital a year later, and to all external appearances he was well.

Case 2. This patient was a man of 48. The onset of his illness occurred eight months before admission. His relatives gave a confusing history of a long-standing suppurative condition following vaccination, followed by ptomaine poisoning.

On first examination we found him in a semi-stuporous condition. He had a partial hemiplegia of the right side, fairly marked aphasia, and hypesthesia of the right side of the body. The left disk was pale and the vessels were elevated. When tested for apraxia, he became interested in the object presented to him.

A diagnosis of either abscess or tumor in the left parietal and lower posterior frontal lobes was made.

He was operated on by Dr. Landon, and a tumor was found in the location indicated. It could not be removed, however.

Following the operation, he developed complete aphasia and apraxia. He was given deep x-ray treatment. In about ten days after the first treatment, the patient could carry on a conversation fairly well, and he had no apraxia. His improvement lasted but one month.

Case 3. A man of 48 complained of severe intermittent headaches which became more and more severe. On examination, we found him to be dull mentally, but complaining of excruciating pain in the head. He had moderate weakness of the right side of the body. In a few days he developed marked choked disks and projectile vomiting. A diagnosis of tumor was made, but the condition of the patient was very bad, so we decided to use deep x-ray therapy.

He was given massive doses repeatedly. He left the hospital about two months after the treatment was instituted, and for six months got along fairly well. He attended to his business. He then returned to the hospital, complaining again of pain and headache in the frontal region. He also staggered to the left. He had most of the cerebellar symptoms on the left side, and his vision was very bad. Following treatment he improved again for about four months, but later the treatment was discontinued.

Comment

All the three patients reported on in this series were given deep x-ray therapy. One was combined with a decompression operation. One patient was apparently cured and remains so up to the present writing, a period of over two years. One showed considerable improvement for about ten months. Both of these patients were treated by the rays exclusively. The third patient was operated on, and the tumor found to be irremovable. This patient showed the least improvement of all. He was better for only a few weeks. But, even he had a considerable amount of betterment while it lasted. This suggests, perhaps, that the treatment is not influenced to any extent by operation. It is evidently more the type of tumor that is of importance. However, a decompression operation should be done whenever the localization points to the possibility of a removable tumor, in cases of cerebellar

tumor, and in cases of severe choked disk where there is danger of loss of vision. It is but fair to the patient to resort to x-ray treatment and give him every chance of recovery.

RECENT INVENTIONS FOR RELIEF OF THE DEAFENED*

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PHILADELPHIA, PA.

Wherever a need exists, there is found an effort to supply it; and wherever a hope exists, there is found some one trying to satisfy it. This, in brief, is the cause of the appearance on the market of over ninety different makes of instruments to aid hearing. It is the reason for the development of an interesting number of new methods for the treatment of deafness.

It may be said: "What do the inventors of these methods and instruments know about deafness?" In most cases they do not know much, but they have the best reason in the world for their efforts—they carry on where the otologist has left off, for the latter has largely dropped the deaf problem. When the deaf patient wearies of going to his otologist, when he finds his hearing no longer improves, he is through with him. But the problem is still the otologist's, even if he cannot improve the hearing.

The hard of hearing often can be greatly rehabilitated by hearing aids. The degree of deafness is the factor rather than the type, and the problem of embarrassment must also be met. No one instrument can be recommended in all cases. Each will have its admirers, because the deafness of individuals varies in pitch. No two are alike, and the same is true of the instruments. An effort has been made to measure the hearing (as in perimetry) and fit an instrument to the ear as glasses are fitted to the eye, but the mechanical difficulties have not yet been overcome.

With hearing aids, distortion and noise are the great bugbear. The nonelectrical instruments (horns, conchs, and tubes) give no distortion or noise, but they do not have the great sound-amplifying characteristics of the electrical or telephonic devices. The latter, amplifying greatly in one characteristic pitch, give considerable speech distortion. To a degree, many of the hard of hearing can learn to interpret speech so distorted; but these instruments are apt to be noisy, and all noise is a dampener of hearing.

Most physicians are familiar with horns, conchs, tubes, audiometers, and the common electrical devices. One of the newer devices has a midget receiver which is very inconspicuous. It is quite serviceable to the slightly hard of hearing. Another portable device uses a small vacuum tube to amplify the sound. For telephone service for deafened persons, the telephone companies will rent a similar amplifying device which is in circuit with the telephone.

A nonportable aid which can be used in office work and in conferences is worth mentioning. It uses the vacuum-tube principle, and is the most pure-toned electrical device that has yet appeared. It operates at great distances between speaker and listener. The microphone in this set is most ingenious and efficient.

Among devices for treatment of deafness and for instruction of deaf children should be mentioned the electrophone and the Bristol instrument. All instruments of this type work with a phonograph with an electrical pick-up of the sound. One of these has eliminated the amplifying tubes and the heavy expensive batteries. It uses merely four common dry cells. In operation it has been found to reach the residual hearing of forty-five out of fifty deaf mutes in one school. This offers great promise in speeding up the education which has heretofore depended upon the visual and kinesthetic methods. A microphone in the circuit allows the child to listen to his own voice. It is touching to see the response of these children when they hear for the first time.

French methods now in use are those of Marage, of Parrell, and of Zundt-Burguet. They are mentioned here because they are new, although they have not yet met with any acceptance in this country.

In the matter of treatment devices, passing over the perennially appearing vibrators, inflaters, and massagers, I would mention first Eldred's auditor. The inventor believed that he could improve hearing by subjecting the patient to a tone or noise. The idea developed from statements about para-acousis. The information received from several capable men who have tested the instrument is unfavorable.

Finally, there is a bone-conduction receiver which is held in the teeth. Such an idea, applied to an audiometer would permit comparison of air conduction and bone conduction such as is obtained with forks. This is most important in differentiating the various types of deafness. Those who are deaf to air-conducted sound but who still have good bone conduction can, in certain cases, hear remarkably well with it. It offers several possibilities, one of which is skull phonendoscopy.

Such is the present status of new features of the deaf-device field. It may be surmised that ground is being gained.

* Read before the Section on Eye, Ear, Nose, and Throat Diseases of the Medical Society of the State of Pennsylvania, Philadelphia Session, October 14, 1926.

SURGERY OF THE GALL BLADDER*

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PHILADELPHIA, PA.

In this paper, the problems of surgical technicalities will not be discussed at length, but rather touched upon briefly in order to illustrate certain points presented. Many of the facts are already familiar. However, certain ones will always bear repetition, and some experiences encountered recently may add interest. I shall discuss mostly the morbidity and mortality of cholecystectomy. Cholecystostomy will be dismissed as an operation which should be reserved for those rare cases of pancreatitis in which the surgeon is compelled to drain the gall bladder, but cholecystectomy, the operation of choice in all varieties of pathology found in the gall bladder, will be spoken of at length.

I still believe that the best interests of the patient are fostered by the removal of the gall bladder in cases of chronic cholecystitis, strawberry gall bladder, cholelithiasis, and all types of empyema of the gall bladder. With all due regard for the normal and abnormal relations of the ducts, I believe that the patient is much better off when this link in the vicious chain of liver, gall bladder, ducts, and pancreas has been removed. It has been stated that ablation of the gall bladder does not cure the patient, since in all probability disease of the liver and duct is left to cause trouble; but the fact remains that the patient is much better, and many recover entirely.

The morbidity in gall-bladder cases arises chiefly as a result of complications which are sometimes present at the time of operation and sometimes follow it. Among the latter, we find accidents to the ducts, many of which are due to carelessness, although some are due to an advanced inflammation causing an entire disassociation of the anatomic relations. I can recall many cases in which the cystic ducts were glued firmly to the common duct, the ampulla of the gall bladder being invaginated under the cystic duct, reaching to the foramen of Winslow. In other cases, the ampulla was adherent to the common duct and to the lesser and the gastrocolic omenta. These conditions may lead to errors in technic. The cystic duct, again, may be so short as to force an encroachment of the forceps on the common duct during operative procedure. When this occurs with a naturally wide pedicle, it is necessary to use a running suture. This is far too frequent an error to be dismissed lightly. I myself am guilty of having cut across one common duct, and it has been my lot to have had several patients in whom the common duct was encroached upon and destroyed by other surgeons. In my own case I recognized the error at once, and repaired it without any disturbance to the patient. If these cases could always be recognized at the time of operation, the task and dangers of late repair would be greatly minimized. I know of no surgery which is more difficult than the repair of a destroyed common duct months after the primary operation.

A case illustrating this point occurred recently. The patient was operated upon four years ago by a master surgeon. A cholecystectomy was performed for cholelithiasis. Almost immediately after the operation she complained of symptoms referable to common-duct obstruction, as a result of which, six weeks after the primary operation, she was again opened in an effort to correct this obstruction. At this time, no obstruction was found. She left the hospital, and for two years she had paroxysmal attacks of pain, but no jaundice. I then operated upon her for what I thought was a stone in the common duct, an injured common duct, or chronic pancreatitis. I found plenty of adhesions, but nothing else. After this operation the patient improved, but only for a time. During this relapse she came under the care of Dr. B. B. Vincent Lyon. Dr. Lyon studied her with his usual thoroughness without, however, giving her any permanent benefit. She was referred back to me, and I still believed that there must be a stone present. An x-ray showed the possibility of one. I opened her again, this being her fourth operation, but found no stone. However, there was a densely adherent common duct attached to the duodenum, encroaching on the papilla of Vater. In separating these adhesions the duodenum was opened, and the common duct was found accidentally. A rubber tube was inserted, and the anastomosis completed with this *in situ*. In completing our toilet, the lumen of the pylorus and duodenum were encroached upon, necessitating a posterior gastro-enterostomy under novocain about forty-eight hours later. After a stormy convalescence the patient left the hospital in good spirits and feeling fine. The x-ray reveals the fact that the rubber tube is still functioning at this writing.

Two years ago, on the same day that this patient was first operated upon by me, I operated on the sister of a physician for the identical chain of symptoms shown by the preceding patient. She made a good recovery and is still well. The only thing done at this operation was the loosening of the adhesions.

Another case illustrates the fact that morbidity plays no little part in patients who have

* Read before the Mt. Sinai Hospital Clinical Association.

been cholecystostomized. The patient was a physician of this city who traveled to Boston about 17 years ago to be operated upon there by that famous surgeon, Dr. Maurice Richardson. At that time it was not a general rule to remove diseased gall bladders, so a cholecystostomy was performed. For a time the patient was better but not entirely well. Ten years later he was again operated upon by a surgeon in this city for symptoms referable to adhesions in the upper abdomen. These were separated and the patient made fairly comfortable again for a while. However, he was still far from cured. He complained of pain, annoyance, and discomfort after eating. This was so persistent that it was necessary for him to abandon his medical practice for weeks at a time. There was a slight jaundice at intervals. He consulted Dr. Lyon, who gave him various tests and after careful study concluded that there was probably a stone at the papilla of Vater. The x-ray did not show any stones. Dr. Lyon referred the patient to me. I felt that the doctor was suffering from adhesions which were tying down the gall bladder to the surrounding structures or from stones. He was operated upon, and dense adhesions were separated. Two small stones were palpated within the walls of the gall bladder, which was promptly removed. The patient has an insatiable appetite since the operation, and foods that he could not take formerly are now easily digested.

Aside from accidents due to surgical interference and errors of judgment, morbidity often arises as the result of indiscretions on the part of a patient who does not follow the instructions of the physician. After operation the patient must be discreet in her diet and be under the watchful care of her physician for a long time. Some say a year, but I believe that after the first year these patients should visit their physician often enough to keep them from indulging in indiscretions.

In some patients there is an inherent quality which prevents them from acknowledging that they are well. It is a curious psychology, but the fact remains that notwithstanding a successful operation and the fact of a perfect convalescence, such patients cannot acknowledge that they are well. Luckily there is only a small percentage of these patients in our operative group.

Mortality after operation depends to a great degree, and I might say solely, on two factors. The first is the character of patients we get as subjects. In this hospital, for instance, we get, without a doubt, the poorest subjects for operation that could be encountered anywhere. The patients are living in poor circumstances in the densely populated sections of the city. Their bodies are impoverished, their muscle tone bad, their hearts of the degenerative myocardial type, and their kidneys, lungs, and vital organs are generally affected. The second factor is the long-postponed date of operation. The gall bladder, acting as a focus of infection, produces most sinister and baneful influences on the heart, which organ must be held responsible for many of the deaths. Our cardiologist can relate to you the history of many cases that he has studied from this standpoint. Again, the majority of patients operated upon for gall-bladder disease are women with fatty and degenerative changes. One must marvel, considering the subjects we have, that so many survive the operation at all. My plea is that earlier operation would reduce the mortality at least half.

It has been stated that the preachment that the operation of cholecystectomy is an easy one and no more difficult to perform than an appendectomy has been responsible for many deaths at the hands of inexperienced operators. Since I myself made such a statement, I wish now to say how sorry I am that the statement has been used as propaganda to induce gall-bladder patients to submit to operation by inexperienced operators. There is no question that the dangers and the sequellæ of cholecystectomy are much greater than those of appendectomy. It is curious how mortality runs in waves. We may have a year free from operative mortality; for instance, the year from 1925 to 1926, during which we did not have a death even in cases of the worst type, such as the empyemas. The past year, however, we were not so fortunate. The mortality should not be over 5 per cent in large clinics, but when the individual patients who have been operated upon by the inexperienced are counted, the mortality does mount high.

The comparison of mortalities subsequent to medicinal treatment with those following operative methods does not seem to be fair when one considers that the only curative means we have at hand is surgical. The other methods, such as drainage by the Lyon-Meltzer method and the administration of the various chologogues, are only palliative. If one were to consider and charge up to these methods the mortality of the delayed cases, the so-called medical-treatment mortality would mount high, if not higher than the operative cases.

Summary

(1) I still believe that cholecystectomy is the better operation as compared with cholecystostomy. (2) The anatomical arrangement of the ducts and papillæ of Vater must always receive

considerable attention during the operation. (3) If the common duct is injured and the injury recognized during the operation, it should be repaired at once. (4) Common-duct surgery is more difficult than any other surgery. (5) In order to prevent the mortality going above 5 per cent, patients should be sent to the surgeon as early in the course of the disease as possible.

Pittsburgh Hospitals

Fred. M. Jacob, M.D.

Secretary, Committee on Arrangements

The hospitals of our convention city are always of special interest to those who attend the annual meetings. In them clinics are usually held during or after the session, and they are always open to inspection by those who desire to visit them. This year, the Section on Pediatrics plans to hold a clinical meeting at the newly completed Children's Hospital which is shown in the illustration on this page.

Pittsburgh at the present time is moderately well equipped with hospitals not only general but special, and with the present vast building program being undertaken by many of these institutions will soon have enough hospital beds to take care of considerable growth. Geographically all are well located, each having a large area surrounding which supplies the various dispensaries and other departments with ample work.

Mercy Hospital, located at Pride and Stevenson Streets, is probably the oldest of the group, having been founded January 1, 1847, by the Sisters of Mercy, in a house on Penn Street, and transferred to its present location in May, 1849. It rendered a great service to Pittsburgh some years ago in several epidemics of smallpox, cholera, and typhoid. For some years it has been connected with the University of Pittsburgh as one of its teaching institutions. Its capacity is 625 beds.

Passavant Hospital began as the Pittsburgh Infirmary in 1848 at Fleming Street, and moved to its present location on Roberts Street in June, 1849. It was founded by Dr. Passavant, and is in charge of the order of Protestant Deaconesses. Its capacity is 158 beds.

Western Pennsylvania Hospital, another of the larger institutions, was planned March 18, 1848, and the building was completed in 1853. After a number of years the trustees decided to move from Brereton Avenue, as one of the industrial sections of the city was rapidly surrounding it. The building was started in 1909, and in 1912 the hospital was moved to a beauti-



Courtesy of H. Samson Company.

Forbes Field, in the Schenley Farms District, home of the Pittsburgh Baseball Club, within one square of the headquarters of the State Society Meeting.



Courtesy of H. Samson Company.

Children's Hospital on Desota Street near Fifth Avenue, Pittsburgh, at which the Section on Pediatrics will hold a clinic during the Pittsburgh Session of the State Society.

ful new building on Millvale Avenue. Its capacity is 500 beds, and a new wing is now under construction.

St. Francis Hospital was founded by the Franciscan Sisters, November, 1865, and completed better quarters in 1871. In 1889 a psychopathic department for females was opened, and in 1891 a larger one for both sexes. It has the largest, in fact the only large psychopathic department of any hospital in the city. It is located on Forty-fifth Street, and has a capacity of 850 beds, but is at the present time planning a $1,500,000 addition. It is also a teaching institution of the University of Pittsburgh.

The Allegheny General Hospital was chartered October 18, 1882, as a result of the great need for a large hospital in what was then the City of Allegheny, now North Side, Pittsburgh. It is the largest North Side hospital, and has always been not only a great necessity to the district in which it is located, but one of Pittsburgh's outstanding institutions. It is located on East Stockton Avenue near Federal Street, and has a capacity of 450 beds, but also at this time is planning a new building.

The Children's Hospital was opened in 1890 on Forbes Street near Craft Avenue, being, as the name signifies, an institution for the care of our most valuable assets. About a year ago it was moved from its inadequate quarters to a beautiful new and modern building on the Porter property. It is the first of a group which the University of Pittsburgh plans to be a great hospital center.

The South Side Hospital was opened by a group of doctors on June 11, 1889, in response to a crying need for a hospital in that district. Considering its size, it handles a huge amount of industrial accidents, and since its inception has vindicated the judgment of its founders. Its capacity is 250 beds.

The Municipal Hospital for Contagious Diseases was opened in 1902. With additions in 1913 it has a capacity of 230 beds, which is evidently an inadequate number for a city of this size.

Pittsburgh, St. John's, St. Margaret's, Presbyterian, St. Joseph's, and Montefiore are all smaller general hospitals, but vastly important in their own districts.

The Elizabeth Steele Magee Hospital is an institution founded and endowed by C. L. Magee for the care of women. It was opened January 19, 1911, in the old Magee residence and the present building was begun in 1914. It is a most complete obstetric and gynecologic hospital of 175 beds. Additions are now in progress.

The Eye and Ear Hospital was opened in 1895 on Penn Avenue, and was moved in 1905

to 1945 Fifth Avenue. It is a special hospital of 45 beds, which is inadequate for this community, but it is planned to have a larger institution of this kind in the new group which the University of Pittsburgh intends to build.

The Pittsburgh Free Dispensary (now the University Dispensary) is the largest and one of the oldest dispensaries in Pittsburgh. It is located on Fernando Street, and cares for great numbers of ambulatory patients of all varieties. It is one of the teaching institutions of the University, and was previously the meeting place of the Allegheny County Medical Society.

The Pittsburgh Skin and Cancer Foundation, located at Forbes and Hallett Streets, is a dispensary having a working agreement with a number of hospitals, and is dedicated to the study of cancer.

The Pittsburgh Diagnostic Clinic, with offices in the Schenley Apartments, consists of a group of physicians, including all specialties, whose aim is to give complete examinations and if possible a diagnosis to referred patients at a flat rate. It was organized for the benefit of people who could pay a small fee but would be financially embarrassed by the burden of regular fees for a great amount of work in making a diagnosis.

Much of the information herein was obtained from the Bedford Lecture by Dr. C. R. Jones, published in the *Pittsburgh Medical Bulletin,* Vol. 11, December 23, 1922.

MEDICAL VETERANS OF THE WORLD WAR

The following circular letter to the Medical Veterans of the World War, was sent out under date of June 9th, and signed by Hubert Work, president, and A. T. McCormack, Secretary:

At the meeting and banquet of the Medical Veterans which took place at the Hamilton Hotel at Washington, D. C., May 18th, Dr. Hubert Work presiding, after a full discussion, it was unanimously resolved to unite with the Association of Military Surgeons of the United States. A committee was appointed with power to arrange the terms of this consolidation and consummate it. This committee, composed of Dr. James F. Mitchell, Lieut. Colonel Med-Res., U. S. A., chairman; Admiral E. R. Stitt, U. S. Navy; General Frank R. Keefer, Med-Res., U. S. A.; Dr. A. T. McCormack, Colonel Med-Res., U. S. A.; and Colonel J. R. Kean, U. S. A., Retired, met on May 19, and reports as follows:

That the union is desirable for reasons well stated by General M. W. Ireland, Surgeon General of the Army, in an address delivered in Philadelphia at the annual meeting of the Association of Military Surgeons in October, 1926: He said: "Another organization having a large and representative membership whose aims and purposes are identical with ours, which should be admitted to the family on an equal footing, is the Medical Veterans of the World War, now numbering some 2,000 members. Let me repeat Article II of the Constitution (which states the objects) of that Society:

"'The Dominant Purpose of this Association shall be patriotic service. The object of this Association shall be: To prepare and preserve historical data concerning the medical history of the war; to cement the bonds of friendship formed in the service; to perpetuate the memory of our medical comrades who made the supreme sacrifice in this war; to provide opportunity for social intercourse and mutual improvement among its members; to do all in our power to make effective in civil life the medical lessons of the war, both for the betterment of the public health and in order that preparedness of the medical profession for possible war may be assured.'

"It is my firm conviction that mutual benefits and much good would be derived by having the M. V. W. W. united with the Association of Military Surgeons. The Medical Veterans could effect this affiliation without in any way impairing the social, historical, memorial aims or usefulness of the society. Once in the Association there could be created a section specifically for the assembly of the Medical Veterans under their own chairman." Your committee believes that this union is especially advisable to accomplish the first and last of the purposes of our organization as quoted by General Ireland from our Constitution; namely, to prepare and preserve historical data concerning the medical history of the war, and in order that preparedness of the medical profession for possible war may be assured.

Your committee has, therefore, under the authority conferred upon it, ratified the union of the two organizations upon the following basis:

1. All members of the Medical Veterans of the World War are eligible for membership in the Association of Military Surgeons upon payment of dues to the latter, and all members of the former in good standing become members of the latter without the payment of additional dues until July 1, 1928, and shall be enrolled as such and receive the magazine of the Association. Thereafter the annual dues of the Association ($3.00), which includes the magazine, shall be the only dues charged them.

2. A section called the Medical Veterans of the World War Section shall be created in the Association which shall include all Medical Veterans of the World War who are members of the Association. This Section shall have such meetings, banquets, etc., as may be determined upon by the president and secretary of the Section in accordance with Article IX of the Constitution of the Association.

3. All records, rolls, and funds of the Medical Veterans to be turned over by the Secretary to the Secretary of the Association of Military Surgeons.

4. The following Section Officers have been elected for the year beginning July 1, 1927, at which date these arrangements will go into effect: President, Col. John O. McReynolds, Med-Res., Dallas, Texas; Secretary, Col. Arthur T. McCormack, Med-Res., Louisville, Kentucky.

If it is worth while having a medical profession at all, it is worth while having a place where they can do their best. That means that a city's hospitals are the measure of the city's intelligent regard for its life. —CRANE.

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Editorials

PERIODIC HEALTH EXAMINATIONS

This is the season of the year when many organizations are taking stock. Taking stock in so far as periodic health examinations are concerned is an open season: The general practitioner should be pretty well imbued by this time with the necessity for, and the procedures involved in making these examinations. The medical journals and the programs of medical societies have fairly teemed with all phases of this question, and every effort, through medical and lay organizations, is still being put forth to keep alive the subject before the medical profession and the laity. It is most disheartening, when the laity is being duly instructed in the necessity for periodic health examinations and urged to consult their attending physician, for the physician to show little or no interest in the matter and disappoint his patient by making a perfunctory examination. It seems to be most difficult to protect the average practitioner from his bad medical habits. We cite here an instance, of which there are too numerous duplications.

A druggist who had noted failing health in a friend advised him to consult a certain physician, who ascertained that two weeks previously the man had been given a health examination by his own physician, without having removed any clothing. The attending physician advised the patient "you are all right, but you need more fresh air." The history clearly indicated a serious disorder, and the examination properly conducted revealed a bowel obstruction from a palpable carcinoma of the rectum. The careless physician in this instance lost an excellent opportunity for being useful to his patient, even though the outlook with the correct diagnosis was unfavorable. It is these gross failures that bring reproach upon our profession and do so much to discredit our altruistic endeavors.

MENTAL DEFICIENCIES IN CONSEQUENCE OF NATAL INTRACRANIAL HEMORRHAGE

One needs only to see a number of infants and children who are victims of natal intracranial hemorrhage to realize the importance and seriousness of this condition, and the value of any suggestions for its prevention and treatment, such as are contained and illustrated in the article by Sheffield which appeared in the *Medical Journal and Record* of February 2d.

When one considers, as the author states, that only about 50 per cent of these babies survive and develop normally, the remainder either being fortunate enough to die, or unfortunate enough to live and be mentally and physically crippled for life, one should ever be on the alert to recognize the condition at the earliest possible moment, and be as fully equipped as possible to treat it in the most intelligent, up-to-date way. Unfortunately, the baby is usually a few months old before it is realized that it has been the victim of natal intracranial hemorrhage, and the golden opportunity to do something for it has passed. While the author states, that "the prognosis of amentia due to intracranial hemorrhage depends, of course, upon the location and extent of the hemorrhage and the steps taken to prevent permanent damage to the brain," it would seem that far more important than the treatment of a well-developed case would be its early diagnosis, and attention is called to the more prominent symptoms that would enable one to do this.

The author further states that "when consulted about an infant with definite signs of intracranial hemorrhage immediately after birth,

it is advisable to do a lumbar puncture," but it would seem the suggestion made by a recent writer of doing a lumbar puncture on all newborn babies, and treating them as cases of natal intracranial hemorrhage if bloody spinal fluid was found, would be far better than waiting for "definite signs of intracranial hemorrhage" before doing the puncture. Surgery is recommended in certain selected cases of this condition, "where the clot can be localized by focal symptoms, e.g., monoplegia," but as the outcome even in such cases is doubtful, and the number where the clot can be localized is comparatively few, it is evident that not many should be subjected to surgical intervention, and but few of those would probably be benefited. Various forms of medical treatment are suggested, but, as the author states, "the treatment can only be symptomatic."

The last paragraph of the article is as follows: "In conclusion, it may not be amiss to remind obstetricians that their responsibility does not cease with the mere delivery of the mothers, and that the babies also are entitled to some consideration during the first few days of their lives, especially after traumatism during birth." This is quoted in full because the writer not only agrees *in toto* with the author, but is also strongly of the opinion that newborn babies are the property of the pediatrist rather than the obstetrician, and hopes that the increasing tendency to transfer the baby to the pediatrist immediately after birth will rapidly increase in favor and be more and more the habit of all obstetricians. This routine is not only of value in institutional practice, but in private practice as well.

THE NEW TREATMENT OF EPILEPSY IN CHILDREN

Investigations which resulted in a new form of treatment of epilepsy in children were begun in 1921 at the Massachusetts General Hospital, having been suggested by the observation that the epileptic seizures ceased during periods of starvation and did not recur until some time after the fasts were ended.

The cessation of the convulsions was believed to be due to the ketosis-acidosis which was marked during the fasting; and consequently a dietetic method of maintaining a ketosis was worked out by which a child could be kept in a state of ketosis for weeks, months, or even years.

This was accomplished by so apportioning the food that the ketogenic outbalanced the antiketogenic elements. If the relation of the ketogenic to the antiketogenic foods is two to one or higher, ketosis develops. The treatment is based upon this fact. Fats are ketogenic, proteins approximately one-third ketogenic and two-thirds antiketogenic, and carbohydrates are purely antiketogenic.

The *Manual for Arranging the Ketogenic Diet,* from the Mayo Clinic, gives the method for gradually altering the diet so that the ordinary proportions of food may, by making daily changes, be replaced by the ketogenic diet in five or six days, but states that the sudden change from the normal carbohydrate diet to the low carbohydrate and high fat may result in nausea and vomiting, and that if nausea develops on the third day small amounts of orange juice may be given and the diet not reduced again until the nausea disappears. In case nausea and vomiting occur during the course of treatment, it advises to return to a more general diet for two or three days, when the disturbance will be overcome and a resumption of the ketogenic diet becomes possible.

The treatment consists of accustoming the child to a diet of three or four parts of ketogenic to one of antiketogenic elements, and maintaining such a diet for from four to six months after the seizures have subsided. The proteins are kept fairly constant, the fats greatly increased, and the carbohydrates reduced. A daily diet of about 32 grams of carbohydrates, 20 grams of proteins, and 132 grams of fat gives a 3 to 1 ratio (1,388 calories). The minimum daily requirement is 50 calories for each kilogram of body weight. The patient should be weighed twice a week; and if there is loss of weight, the number of calories should be increased, maintaining the same ratio of the ketogenic to the antiketogenic elements. The foods used to supply the fat are principally cream, butter, egg yolk, and bacon.

In some cases it requires several weeks or a month to accustom the child to such a diet, many returns to a more normal menu being necessary before a state of toleration is brought about, and it will be noticed that the convulsions persist until such a state of toleration is finally established. It is necessary to examine the urine frequently to see that acetone and diacetic acid are present. If the acetone disappears, the ratio must be increased.

How permanent the results of this treatment may be cannot be known for some time; but the fact that there is a symptomatic cure and relief from the possible immediate effects of the convulsions such as exhaustion and injury, to say nothing of the comfort of the parents, warrants its trial together with the troubles entailed in mastering the mathematical problems in working out the food proportions, which, however, is not in reality a very difficult task.

THE SIGNIFICANCE OF HEMOPTYSIC ONSET IN TUBERCULOSIS

The symptom of hemoptysis in the apparently well has always been regarded as a suspicious sign of pulmonary tuberculosis, and if it occurred in the young adult in the absence of mitral stenosis, we were taught years ago that even though on careful physical examination we found no evidence of lung involvement, in the course of years many of these cases would be found to have active pulmonary tuberculosis. Later investigations and more systematic study of the cases revealed the fact that the hemoptysic onset of tuberculosis seldom occurs without appreciable evidence of actual disease in the apex of the lung, especially on the right side, and often sputum may be collected and found to contain tubercle bacilli.

Inasmuch as tuberculosis is still so very common a condition that it confronts every practitioner daily, in the event of a slight hemoptysis with no obvious cause, it behooves every physician to remember that on this subject we must unlearn and learn anew the fact that our previous teaching relative to the significance of an early hemoptysis had an element of truth in it, but that we were mistaken in the usual nonexistence of associated pathologic findings. Let us not make the diagnosis of ear'y tuberculosis on the symptom of hemoptysis alone, but use modern methods and care in determining the existence or nonexistence of pulmonary tuberculosis. By exercising such care we will find that hemoptysis seldom occurs in early tuberculosis without some appreciable evidence of disease which will be revealed by the history, careful physical examination, and microscopic and x-ray study of the case.

RESERVATIONS FOR THE PITTSBURGH MEETING

The Hotel Committee for the Pittsburgh meeting of the Medical Society of the State of Pennsylvania has requested us to announce that all the rooms set apart at the Hotel Schenley for the use of members have been reserved, and no further accommodations will be available at the Schenley.

The Committee can still take care of quite a number of men at Webster Hall, and requests that such reservations be addressed to Dr. I. H. Alexander, Chairman, 725 Jenkins Building, Pittsburgh, Pa.

Reservations made at the William Penn, Fort Pitt, and other hotels should be made direct with the hotel management.

This is going to be a big meeting, and reservations should be made early to avoid disappointment. The meeting dates are October 3d to 6th.

THE AMBULANCE AND THE TRAFFIC

We are rather inclined to the belief that hospital administrators should exercise more control over the speed maintained by their ambulances than is now in vogue. The change from horse-drawn to motor-driven vehicles naturally has increased the speed, and since motor ambulances appeared, there has been no limit to the speed maintained in the streets, whether crowded or not.

One who is accustomed to being on the streets daily, as physicians are, has a very good opportunity to observe the manner in which ambulances are given the right of way. The driver of the ambulance assumes this prerogative at all times. But should an ambulance always demand the right of way? An ambulance that is leaving the hospital on an accident case should have the right of way, not knowing the condition of affairs at the seat of accident. But even under these conditions the speed of the ambulance through the streets of a city should not be greater than will afford the driver reasonable control, for it should be borne in mind that having the right of way is no guarantee that the ambulance will not be run into or that it will not collide with some other car or property.

When the ambulance returns with the patient, if there be no special reason for hurry; when it is calling for the transfer of a patient to the hospital, where time is not a factor; or when it is returning after having taken a patient from the hospital to the given point of destination, it would seem wiser and safer to move with the traffic. Surely this procedure would tend to reduce the number of collisions and near accidents that are reported from time to time.

The peace of mind of the patient certainly should be taken into consideration. It must be a source of anxiety to a patient, who cannot see what is doing, to be shut up in an ambulance, lying flat on his back, and unnecessarily hurried along, turning corners literally on one wheel. The unnecessary clanging of the bell must be a great annoyance.

We recently asked an ambulance driver with years of experience what were his greatest troubles with ambulance interns. He replied: "To make them lay off the bell," and not to pay any attention when they say "step on it." This employee has had a long experience, having advanced from the one-horse to the two-horse ve-

hicle, and then to the motor ambulance. His greatest concern when on the street is to avoid collisions, and as he states, "it is better to be safe than sorry."

We once saw a two-horse-drawn ambulance driven through the streets at break-neck speed, turn into the hospital yard veritably on one wheel, whirl around and back up to the accident-room entrance. The customary crowd that gathers on the return of an ambulance to the hospital had assembled. The doors were opened, when lo, a barrel of flour was dumped out! When this episode was reported to the superintendent, the reply received was: "The horses needed exercising."

We recently drove for several squares back of an ambulance that was returning, empty, to the hospital. It was necessary to pass another hospital, several squares from its own. When about a square from the hospital in question, the ambulance suddenly shot forward with bell clanging furiously. When about one square beyond the hospital, the ambulance reduced its speed, discontinued the bell, and peacefully proceeded on its way, slowly entering the grounds of its own hospital. The incident was so unnecessary, so uncalled for, and it was so evidently done to make an impression upon the hospital that was being passed, that we called it to the attention of the superintendent (with whom we are well acquainted) of the hospital to which the ambulance was attached. The intern and the driver both denied the occurrence. When they were told the complaint had been made by a physician, who had been driving for some time back of the ambulance, they admitted they had done it to fool the hospital in question, not giving a thought to the unnecessary noise and disturbance and any effect it may have on the patients in the hospital.

Every now and then the press records collisions between ambulances and other vehicles at which people are injured or killed. It seems so out of place that an ambulance, on its errand of mercy, should maim or kill others. Is the undue haste on the part of the ambulance necessary in all instances? We think the ambulance surgeon should use judgment, and properly instruct the driver as to the speed to be maintained.

In January the press gave an account of an ambulance speeding to a Brooklyn hospital with two children burned in a Christmas-tree fire. The ambulance was struck by a taxicab and turned over. Six persons were hurt, two critically. As the ambulance was speeding along, according to witnesses, two taxicabs ignored the warning bell and tried to cross in front. The first taxi got by; the other failed to do so. The force of the collision turned the ambulance over and drove it nearly twenty feet. Its top was smashed and the occupants pinned under the débris. Another call had to be sent for two ambulances to remove those injured in the collision to the hospital.

We know of a hospital whose ambulance was having an unwarranted number of collisions. It was decided to remove the bells from the ambulance and to attach to each machine an odometer, the graphic chart of which is placed daily on the desk of the superintendent. The ambulance drivers have orders not to exceed 20 miles in driving through the streets. Should the graphic chart show that the speed limit has been exceeded on any trip, the driver is required to explain the reason. Discipline is meted out for unexcused offenses. Since the bells have been removed and the odometer readings daily noted, there have been no collisions.

We are not recommending the removal of bells from ambulances, but we are recommending that the unnecessary use of the bell be abolished, and the intern on ambulance duty be made to realize the bell is not a toy to be played with. We do feel that if those in charge of ambulances would use better judgment on the streets and not crowd in and demand on all occasions the right of way, but follow with the traffic when their mission is not urgent, collisions and near accidents would be reduced to a minimum.

It is a common occurrence to observe that fire apparatus hurries at full speed through the streets to respond to a fire call, but that on returning to the fire house the speed is much reduced, frequently fitting in with the regular traffic.

It appeals very strongly to us that much can be done by concerted action on the part of hospital executives in regard to this feature of ambulance service.

TOOTH DECAY AND BALANCED METABOLISM IN INFANCY AND CHILDHOOD

An article on this subject by Scott, of New York, which appeared in the February 2d issue of the *Medical Journal and Record,* deserves more than passing attention, the author well stating that it "requires the coöperation of all minds in almost all the specialties," and quotes Kassowitz as believing that "90 per cent of children suffer from incipient caries at dentition owing to . . . nutritional upsets, and particularly to rickets." "General metabolic unbalance" is the way the author describes the relation between cause and effect, and he ascribes much

importance to hereditary defects as a cause of pathologic dentition. Reference is made to the percentage of tooth decay as seen in different races and peoples, together with the reasons therefor in each race, diet, however, being the principle factor in practically all races, and it is for the latter reason that attention is editorially called to the subject.

If, as the author states, dental caries depends upon a chain of causes, but largely on nutrition, especially calcium, phosphorus, and vitamins in the diet, it behooves the general practitioner as much as, in fact more than, the pediatrist to acquaint himself with the methods of preventing this condition, the pediatrist frequently not seeing these patients until the damage has been done, and the golden opportunity being lost of practicing preventive rather than curative medicine. While these methods of prevention are not described in detail by the author, if physicians would only realize their importance, and desire to familiarize themselves with the methods, ample literature on the subject is available in medical journals and textbooks, from which those interested can readily equip themselves to ward off not only the dental caries, but the many associated conditions of malnutrition that play such an important part in the production of the caries. Here, again, too much stress cannot be laid on the necessity for periodic health examinations in children of the preschool age.

WHISTLING

Psychologists in recent years have invaded the psychic realm for an understanding of man's thoughts, feelings, and actions. Within a very recent period, great emphasis has been placed particularly on his conduct and behavior. We are inclined to regard man more in terms of actions and deeds, and less in terms of thought. From this angle we interpret love, fear, hate, the libido, and even laughter. Why whistling has not been attacked by the great legions of thinkers is difficult to understand, for all the world whistles. Furthermore, whistling ordinarily speaking, except in the performance of skilled renditions of melodies, is dissociated from the intellect.

Whistling no doubt is associated with the psychomotor apparatus as the voice in calling. We hail with a whistle. Preëminently it seems closely allied with the emotions. For example, the whistle of revelry—that borderline state between the conscious and the unconscious; the whistling associated with pleasantries. Then we have the whistling associated with fear, as in dark rooms, lonely country roads—a fear reaction. Then we have the nervous whistle, observed under stress, poker games, etc. Then the whistle of irritability—commonly observed in the boss when one asks for a raise. Then the whistle of aggravated mental states—yea, even madness.

Now this explanation may be all wrong, but let us hope, right or wrong, that it will stimulate deeper thinkers in the study of this phase of man's conduct and behavior. In the interim, inasmuch as this is a wholesome indulgence and thus far not yet attributed to a sex desire, let's keep on whistling.

A NEED OF PHILANTHROPY

The Middle-Class Mental Patient

A study of philanthropies reveals that the greatest contributions to humanity have been to education, hospitals, charities, parks, monuments, and highways. Few are listed under the heading of mental hospitals or institutions exclusively for the mentally ill.

The mental patient of the middle classes offers a field for the most noble of philanthropies. Like his brother, the general hospital patient, he is entitled to humanity's consideration; yea, even more so, for he is not only confronted with the financial side, but in truth has no place to go except to a county or state institution erected principally for indigent groups. One can infer what this implies.

Money made available for small hospitals throughout the United States for the sole use of the middle paying classes would be an ideal objective for the philanthropist. Hospitals with limited bed capacities, inexpensive in architecture, economically administered, fully manned and equipped with modern treatment agencies, located between woodlands and meadows, the latter for agriculture pursuits, would not only be idealistic, but a haven indeed.

The middle classes carry the load. They are the bulwark of civilization. They toil and murmur not. They are entitled to some consideration, some evidence of appreciation, some living testimonial.

JOTS AND TITTLES

Recent Scientific Developments

A Serum for treatment of bites by rattlesnakes, moccasins, and copperheads, effective if injected twelve to twenty-four hours after the bite, has been produced by Dr. Afranio de Amarai at a snake farm near Philadelphia. The value of this serum has been confirmed by tests under the auspices of the U. S. Public Health Service.

DRS. HERMAN BLUMGART AND SOMA WEISS, of the Thorndyke Memorial Laboratory of the Boston City Hospital, have developed a method by which the speed of the blood stream within the body can be measured. A small amount of a radio-active substance is injected into the veins of the arm, and the time of its arrival at various parts of the body determined by means of an electrical testing device.

ACCORDING TO DR. MARTIN MENDELSOHN, professor of diseases of the heart in Berlin University (Germany), "the human body's motive power is represented by the cellular activity of the glands and skin in absorbing and excreting liquids which furnish the requisite fuel for the human motor, whereas the heart and blood circulation merely play a regular rôle in distributing such fuel and resulting refuse to and from the various motors throughout the body, namely, the internal, glandular, and epidermic cells." Dr. Mendelsohn holds that other tests besides cessation of the heart beat are necessary to establish true death.

Dietary Notes

EXPERIMENTS ON RATS indicate that a diet deficient in vitamin A results, as one of the early symptoms, in infections of the nose and throat similar to a human "cold."

MILK, NOT BREAD, is the "staff of life," according to Dr. George Walker, of Baltimore, Md. "One may live on milk alone," he says, "if one will drink enough. Five quarts of milk a day will keep one alive. Milk contains every requisite food except iron."

RALPH HOAGLAND, biochemist of the Bureau of Animal Industry, United States Department of Agriculture, and his associates, as a result of feeding experiments with 4,000 albino rats lasting over a period of ten years, have shown that lean pork is rich in vitamin B but low in vitamin A, while the vitamin contents of eggs is just the opposite. Thus meals containing ham and eggs or bacon and eggs furnish a liberal supply of these two important food elements, besides fat, protein, minerals, and other desirable constituents.

Other studies conducted by the Government have shown that the proteins in certain animal products, such as lean meat, fish, milk, and eggs, have a higher nutritive value than those found in wheat, corn, rice, oats, and navy beans when each product is the only source of protein in the diet; but that in a mixed diet, meat proteins greatly increase the nutritive value of the cereal proteins. Thus the proteins in the bread of a ham sandwich become more nutritious when eaten in combination with the meat.

Another unusual quality of the hog is the widely varying composition of different parts of its body. Moisture content ranges from about 8 per cent in the back fat to more than 66 per cent in tenderloin. Protein varies from about 4 per cent to more than 24 per cent in different cuts. Fat ranges from 13 to 90 per cent, depending on the portion of the carcass selected. The mineral portion of the meat, chemically spoken of as ash, ranges from one-tenth of one per cent to more than two per cent in different cuts.

Meats of all kinds have been reported by the Department to be among the most digestible of human food products, and pork compares favorably with other meats in this quality. It has been found that pork digests completely and leaves the stomach in approximately three hours and fifteen minutes. It digests slightly more rapidly than turkey, in the same time as chicken, and slightly more slowly than beef or lamb. The difference in the average time of digestion among the various meats, however, is considered to be of slight significance. On account of its high energy value, pork is particularly valuable as a food for persons engaged in heavy manual labor. The leaner cuts, however, such as ham, tenderloin, and chops, may be eaten interchangeably with other meats even by persons leading sedentary lives.

Investigation of Causes of Chronic Progressive Deafness

AN ADDRESS BY DR. E. B. DENCH, professor of otology at New York University, before the open meeting of the American Otological Society, on May 20th, outlines the work being done by the research committee of the Society to determine causes of progressive deafness. Funds were appropriated two years ago by the Carnegie Corporation for the study of otosclerosis, and the Society has raised a fund for research to include all causes of progressive deafness. The committee has requested all the hospitals of New York (and this will later be extended to hospitals throughout the country) to coöperate by furnishing specimens and clinical histories. The literature on the subject is being thoroughly abstracted to prevent any duplication of effort. A certain amount of the work is being done abroad by Professor Wittmaack of Hamburg, as few men in this country are trained to do certain phases of it. The committee is working in conjunction, also, with the League for the Hard of Hearing, which has approached the question from the standpoint of relief of the condition when once present.

The investigation will include the examination of a large number of normal temporal bones in order that variation from the normal unattended by symptoms may be classified. Inheritance will also be studied, as well as the effects of general diathetic conditions and general constitutional diseases which may possibly cause changes in the structure of the temporal bone without producing the classic symptom always attributed to these changes. Tests as to variations from normal metabolism in conjunction with changes which may take place in temporal bones will be made; also as to a lack or increase in the calcium content of the blood, and the possibility of artificial production of these microscopic temporal-bone changes in animals subjected to various diets, endocrine secretions, increase or decrease of calcium in the diet, and artificial infection with lues or tuberculosis. These and many other possibilities will be studied by the committee, and laboratory experiments on animals are well under way.

Items of Interest from a Life Insurance Report

THE FOLLOWING INTERESTING ITEMS are culled from the annual report for 1926 of the Mutual Benefit Life Insurance Company: The loss from suicide amounted to almost twice that experienced in 1925, but was less than in either of the years 1923 and 1924. It would appear from the numerous accounts of suicide reported in our daily papers that these are increasing in frequency, but based on number of lives exposed, it is not actually increasing.

The automobile is an ever-increasing hazard. It is obvious that the various measures employed to obviate automobile accidents should be augmented. Both carelessness and ignorance undoubtedly play a large part in these accidents. It will appear, for instance, that much ignorance still exists concerning the deadly nature of exhaust gas (carbon monoxid). It seems hardly credible that any automobile owner today should fail

to know that this poisonous gas is produced by a gasoline engine when in operation.

An underwriting department must maintain a very strict selection in order to combat the increasing death rate from the so-called degenerative diseases. Very often these unfavorable risks may be predetermined by careful physical examination when combined with reliable histories.

Medical Aid in Arabia

Medical missionary work in the East is doing more than anything else to break down religious prejudices, according to Dr. Louis Paul Dame, missionary and explorer, who has spent the last seven years in Arabia. "There are 8,000,000 people and no recognized hospitals or doctors in Arabia," said Dr. Dame. "The bodies of the people are covered with scars, because their only method of treating illness is with hot irons. Sevent-five out of every hundred children die before they reach the age of two. Those who do not die are constantly in poor health. They all, young and old, live lives of pain." Dr. Dame described the work done on Bahrein Island, in the Persian Gulf, where a great hospital has been established. Last year, he said, 33,000 patients were treated and 1,000 operations were performed.—*New York Times.*

MEDICOLEGAL AND LEGISLATIVE NOTES

Pennsylvania Legislation in 1927.—The following bills which passed the 1927 Legislature and were signed by the Governor have been added to the Pennsylvania statute books. They are listed for their possible interest to members of the profession.

Subject of Bill	*Bill No.*	*Act No.*
Providing for immediate registration of all births and deaths	H 1205	434
Amending act creating borough board of health	H 509	123
Extending civil service to health officers, sanitary policemen, and inspectors in third-class cities	H 398	119
Creating a commission to study the laws relating to the healing art	S 1326	396
Requiring local health officers to report communicable diseases weekly	H 508	40
Amending the drug-enforcement act of 1909, P. L. 470	H 1295	292
Regulating ownership of pharmacies and drug stores	H 1370	491
Fixing penalties for violation of act relating to State Department of Health	H 507	122
Repealing all acts which provide for the indenture of minors	H 1043	454
Regulating State registration of nurses	S 865	477
Fixing penalty for failure of osteopaths to register annually	H 935	95
Amending act of 1923 relating to mental diseases, P. L. 998	H 927	281
Authorizing coöperation of counties and municipalities in enforcement of health laws	H 510	41

Federal Health Activities.—*Nation's Business* favors "granting the President of the United States authority to centralize, at his discretion, all public-health activities of the Federal Government, exclusive of those relating to the Army, Navy, and Veterans' Bureau. The agency charged by the President with responsibility of supervising these activities should be empowered to delegate experts to various governmental departments, to universities, or general research organizations looking toward the improvement of public health."

Testing Constitutionality of Turner Act.—Suit has been brought in the Federal courts to test the constitutionality of House Bill 1370, Act No. 491, which requires that all owners of retail drug stores be registered pharmacists. It is claimed that this act was aimed at the chain drug stores whose stock is not owned in all cases by registered pharmacists. It is difficult to see any valid reason for the passage of this act, provided the responsible manager of each store is a qualified pharmacist, as required by previously existing laws.

New Jersey Discontinues Legislative Lobby.—As suggested by Dr. Henry O. Reik, executive secretary of the New Jersey Medical Society, that organization has voted to discontinue the lobby maintained at Trenton to foster medical legislation. Dr. Reik urged that this method of influencing legislation is beneath the dignity of the profession, and that correspondence with the legislators was the proper method.

County Tuberculosis Hospital Act Constitutional.—The Pennsylvania Supreme Court, in an opinion by Justice Schaffer, has declared constitutional the Act of March 23, 1925, which provided for the establishment of county tuberculosis hospitals. This Court has decided that the Act is not mandatory but permissive, and when the construction of hospitals has been authorized by vote of the people, the final decision as to whether or not they shall be built rests with the county commissioners. In Northampton and Montgomery Counties the county courts upheld the constitutionality of the Act; but in the former, a decree was issued requiring the commissioners to provide a meeting place for the advisory board, while in the latter, the county commissioners' petition to vacate the appointment of an advisory board was refused. Both decrees were reversed by the higher court. The decision of the Schuylkill County court declaring the Act unconstitutional was reversed, but the refusal to appoint an advisory board was affirmed because no such board is held to be necessary until the county commissioners have determined to proceed with the erection of a hospital.

Hospital Liable.—In the case of Tribble vs. Missionary Sisters of the Sacred Heart (Wash.) (242 Pac. R., 372) the Supreme Court of Washington has affirmed the judgment of the lower court awarding damages to the plaintiff, who is alleged to have been severely burned by a hot-water bottle while a patient in the hospital of the defendant corporation. In its opinion the Court held that even a charitable corporation is responsible for the mistakes of servants who do not exercise reasonable diligence and take proper precautions in the care of patients.—*Bulletin*, New York State Board of Charities.

Vaccination Certificates.—Recent newspaper publicity has been given to the case of a nurse who developed smallpox. It appears that a physician had previously issued a certificate of vaccination. The certificate was used by the nurse as part of her credentials in applying for an appointment in a given hospital. The physician in question, when duly accused, replied in rebuttal that the certificate was only a questionnaire, that all the answers were not based on his own knowl-

edge, and that the blank did not call upon him to make any physical examination. He further stated that he had since been advised by counsel (his brother) that had he attempted to verify the girl's statement as to past vaccination by insisting upon examination of her leg he could have been held liable for assault. He further stated that the State Health Board authorities of the State where the hospital is located, had decided that he acted within his rights in refraining from a physical examination.

We were under the impression that a physician in signing such a blank always ascertained first that there was a successful scar.

Cause of Paralysis Within Meaning of Policy

The Alabama Supreme Court holds, Southern Ins. Co. v. Wilson, 108 So. 5, that the use of the word "paralysis" along with "consumption" and "heart disease" in the stipulation in a policy limiting liability to one-half the face value of the policy if death resulted within twelve months from "consumption, paralysis, or heart disease," indicates an intent to cover risks from somewhat chronic conditions, obscure, perhaps, at the time, but developing into fatal results within a year. Whether it should include apoplexy or be limited to the chronic disorders called palsy among the laity, the court did not find it necessary to decide. There was evidence that the insured was not sick, but was injured while on his way to work. It was held that if cerebral hemorrhage, apoplexy, and resultant paralysis were caused by a shock, death would be referred to the original cause, not to apoplexy within the meaning of the policy.—*Medical Journal and Record.*

PUBLIC HEALTH

For a Lower Infant Mortality.—The results of the efforts to lower infant and maternal mortality rates and the methods used to promote health work among babies, children, and mothers were vividly portrayed by interesting exhibits which the state bureaus of child hygiene sent to the recent conference of the directors of these bureaus at Washington, D. C. The conference was called by the Children's Bureau of the U. S. Department of Labor to discuss methods and policies of work under the Federal Maternity and Infancy Act. The exhibits consisted of charts, posters, wall panels, and models covering a wide variety of subjects.

"The baby can have his sun bath in winter as well as in summer," says the Michigan Bureau of Child Hygiene, and they sent a very attractive model to prove it. The model is in two sections. One section is a summer scene with a lawn in front of it divided into four spaces by little white fences. In each space, on a white blanket edged with a dainty pink border, lay a doll baby representing some phase of the sun bath. The first baby had his tiny arms exposed; the next, his arms and dimpled little knees; the next, his arms, knees, legs, and feet; while the fourth one was entirely exposed to the sun. The length of time for each exposure was given on a neat card in the corner of each space. The second section of the model showed a winter scene through the open window of a very bright room. In tiny white beds placed in the patch of sunlight coming through open windows more baby dolls were shown properly dressed—perhaps one should say, undressed—for exposure to the sun's rays.

Far-away Hawaii sent very interesting pictures of the work in its child-health conferences. One picture was that of two very bright little boys learning the use of the tooth brush. In another picture one wonders why the little lad kept his shoes on while he is being weighed, but the explanation is very simple. It is his very first pair of shoes, and he absolutely refuses to take them off even to be weighed! A picture of the baby sleeping very comfortably in his home-made bed—a box—tells how the Hawaiian mother is being taught that every baby must have his own bed even if it is only a box.

Charts showing a decrease in the death rates of babies, children, and mothers were sent in from New York, Tennessee, Ohio, Pennsylvania, and South Dakota. Connecticut sent charts showing an increase in well children's conferences. Delaware, Georgia, and Mississippi sent copies of their publications.

Louisiana contributed some pictures showing improvement in the work among the midwives, especially in the remote rural communities. Pictures showing how the midwives came for miles around, some traveling as far as thirty miles to attend class, gives one an idea of the interest displayed by the midwives themselves. They used any means of transportation to get to their meetings, and many of them walked long distances. Pictures of classes of trained midwives call attention to the great improvement in equipment, cleanliness, and general appearance.

Missouri had some very unusual charts. A State Law requires that drops of a solution of silver nitrate shall be put in the eyes of every new-born baby. One of the charts emphasized the fact that provision has been made for free distribution by the State Board of Health. A registrar's calendar was also displayed. The leading feature of this calendar is the date noted in red on which the local registrar is to report. The function of the calendar is to encourage birth registration.

A very attractive blue poster with a gold star in the center, the edges of which were rolled back so as to show two cunning children, was sent by Virginia. It is a poster used in the preschool health work to promote interest in the five-point child. A five-point-child is one who measures up to the State's minimum standards in vision, hearing, teeth, height, and weight. A pocket in the lower corner of the poster holds some little pamphlets about the five-point child.

Wisconsin's slogan is "Every Wisconsin girl educated for intelligent motherhood." Judging by the strenuous program which has been planned by the Bureau of Child Welfare in coöperation with the State Board of Public Instruction, the State Board of Normal Regents, and the State Board of Vocational Instruction, it looks as if they will accomplish their purpose. Posters from Wisconsin showed the scope of this particular phase of infant and maternal hygiene. State books and material are being used.

Pellagra Prevention.—A recent writer on this subject drew the following conclusions:

The expressed juice of canned tomatoes given in a daily quantity of approximately 1,200 grams (40 ounces) was found to possess well-marked pellagra-preventive action.

A daily supplement of cooked carrots equal to 453 grams (1 pound) of the dressed, raw vegetable failed as a pellagra preventive.

A daily supplement of cooked rutabagas equal to 453 grams (1 pound) of the dressed, raw vegetable failed as a pellagra preventive.

The failure of the carrots and of the rutabagas may have been due to the ingestion of a quantity which, although seemingly liberal, was too small; nevertheless, if carrots and rutabagas, as is probable, actually possess pellagra-preventive action, this must be rather feeble.

Although definitely demonstrated, the pellagra-preventive potency of canned tomatoes must be rated as of a feeble order.

Tomatoes are recommended for use in the treatment of active cases of pellagra, and it is suggested that a more liberal use of this vegetable, particularly in the late winter and spring, be encouraged as a preventive measure.

State Health Department News

IN VIEW OF THE SERIOUS TYPHOID EPIDEMIC in Montreal, Canada, Secretary of Health Appel recently broadcast a warning to the citizens of Pennsylvania advising them to avoid that city unless it was absolutely necessary to go there, in which case he urgently suggested typhoid inoculation before the trip.

THE MOBILE LABORATORIES NOS. 1 AND 2, assigned to the examination of individual water supplies along the highways, have already completed their work in western and eastern Pennsylvania. The central section of the State is also well in hand. Placards insuring the safety of individual sources, as well as those indicating danger, have been put up considerably earlier this season than in former years. This was explained on the basis of the additional laboratory in the field and familiarity with the work and sources based upon previous experience.

THE TWO STATE MOTORIZED HEALTH CARS now in the rural districts of Pennsylvania for the purpose of checking up defects of children of preschool age and referring them to the local physicians have, within the first ten days, examined over 1,800 children. Work in Forest and Crawford Counties has been completed by the first unit, and work in Wayne County by the second. This is a record for the first ten days' activities.

ACCORDING TO A REPORT received by the State Health Department, 1,104 were examined for tuberculosis during the last thirty-day period at the various State Clinics. Total visits to the clinics were 4,510. Patients numbering 263 have been admitted in the last month to the three sanatoria located respectively at Cresson, Hamburg, and Mont Alto.

THE MILK DIVISION of the Pennsylvania State Health Department recently completed a three-weeks' investigation of the milk-receiving stations in Ohio, the output from which, approximating 100,000 quarts daily, is used in Allegheny County. This study was made to protect that portion of Pennsylvania's citizenry using Ohio milk. Recommendations to improve this milk supply, which was found to be in fair condition, have been made to the Secretary.

THE GENITO-URINARY CLINICS throughout the Commonwealth in the last thirty-day period received 7,053 patients. State nurses in connection with follow-up home visits in this work made 558 calls during the month.

ALL LOCAL REGISTRARS have been notified by the Department of the recent consolidation of the registration districts. The Department is making every effort to obtain the complete number of births in the State, and has indicated to the registrars that this can be accomplished only by a house-to-house canvass, checking up baptismal records in local churches, birth notices in newspapers, and deaths of children under one year.

INDUSTRIAL MEDICINE

A Conference on Industrial Nursing was held June 14th by the State Department of Labor and Industry in coöperation with the Department of Health. The delegates were welcomed by Honorable John S. Fisher, Governor of Pennsylvania. The chairman for the morning session was Honorable Charles A. Waters, Secretary of Labor and Industry. A luncheon meeting of industrial nurses was held at the Penn-Harris Hotel, at which Miss Alice M. O'Halloran, Directress of Nurses, State Department of Health, acted as chairman. The afternoon session was in charge of Secretary of Health Appel. In addition to the Secretary, those who spoke at this session were Dr. L. R. Thompson, Chief, Division of Industrial Hygiene and Sanitation, U. S. Public Health Service; Dr. Wade Wright, Assistant Medical Director, Metropolitan Life Insurance Co.; Julia A. Wedder, R.N., of the Giant Portland Cement Co.; Mr. John Troxell, Director of Education, Pennsylvania Federation of Labor; Dr. Elizabeth B. Bricker, Chief, Section of Hygiene and Sanitation, Department of Labor and Industry; Mr. C. B. Auel, Manager, Employees' Service Department, Westinghouse Electric and Manufacturing Company; and Dr. W. J. McConnell, Medical Director, General Electric Company, Philadelphia.

Mental Hygiene in Industry.—Today both medicine and public health are having problems of mental disorders forced upon their attention, and changes in handling of the mentally ill are coming about rapidly. During recent years the care and treatment of the insane have been put upon a new basis. More intelligent methods for dealing with the feeble-minded have been worked out. The better penal institutions rely more and more upon psychiatrists for the mental examination of prisoners. Juvenile courts of the more progressive type count upon the services of similar experts. From the more obviously defective or abnormal, the movement has gone on to include behavior- or habit-clinics for young children, special classes for backward school pupils, and work among adolescents and adults who are victims of various nervous and mental disorders. Of late, college students have been receiving attention. In a number of university centers there are now psychiatrists, psychologists, and mental hygienists who are looking after undergraduates.

A beginning is also being made in doing something of the same sort in industry. The growth of modern large-scale industry has brought to light many problems of adjustment among the labor forces. Studies and experiments by specialists in psychology and mental hygiene are at any rate suggesting significant possibilities in this field. With respect to mental diseases the tendency has been away from preoccupation with cure to an interest in prevention, and mental hygiene, as its scientific basis becomes more secure and its methods increasingly efficient, may be expected to take its place in a well-rounded program of preventive medicine and public health.—*Information Service of the Rockefeller Foundation.*

Large Attendance and Interesting Program at Safety Meeting.—The fifth annual Midwest Safety Conference was held at the Hotel La Salle, Chicago, February 21st. A paper at the morning session dealt with safety in the small plant, asserting that the small

plant is not paying as much relative attention to safety as is the large plant. The keynote for an efficient safety record in the small plant, as in the large one, is mutual confidence. Very little can be done with safety work unless the employees and the employer have come to the point where they realize that the promotion of the movement is for the benefit of both, and not something that the "management is trying to slip over on the worker." Suggestions which will make the plant safer should be constantly made by employees, and the first-aid cabinets in the plant should be stocked with only the very essential items, so that there is no excuse for an injured employee not visiting the doctor. Another paper stressed the point that the history of the employee is of the utmost importance in determining his fitness, especially in cases where an applicant has already spent a considerable time in work which has a derogatory effect upon health. Follow-up medical work on those with some physical defect is of great importance, and men in this class should not be transferred from one job to another without the knowledge of the plant physician. Periodic examinations are important, their frequency varying with the type and severity of the physical defect. Employees with a heart murmur or hernia should be examined about once in three months, and every employee, regardless of standing, should be reëxamined once a year.—*Hospital Management.*

Blame for Occupational Hazards.—The record of industrial fatalities for Pennsylvania thus far in 1927, while deplorable enough, is probably not so hopeless as surface indications might lead one to believe. It is true that the total for the first four months disclosed an excess of sixty-one over the corresponding period of the previous year. This difference is more than explained, however, by the rise in mining accidents, leaving to other industries an actual reduction. The unfortunate situation in the mines is attributed to the enlarged anthracite operations.

Factories established a low April record with only twenty-six deaths, compared with an average of forty. The showing indicates that manufacturers and their employees are coöperating in the observance of precautions to a degree that ought to set an example for the rest. Nor should the force of this example be lost on the general public. Too often the problem is thought to be one concerning only the worker and his boss. Yet negligence may arise from sources beyond their control. For instance, six laborers, while working on highways in April, were killed by motorists who disregarded warning signals. That is rather high toll for humanity to pay when all circumstances are considered.

Here the blame rests with trespassers—specifically careless drivers, a third party in addition to the two usually concerned in the assumption of vocational risks. If this public recklessness cannot be curbed it is likely to offset all that can be gained by steady improvement made in manufacturing enterprise.—*The Philadelphia Inquirer.*

Prevention of Eye Accidents.—The eye hazards of industrial occupations in New York State robbed 720 workmen each of the sight of at least one eye, and cost the employers of the State $1,300,000 in compensation, according to Lewis H. Carris, Managing Director of the National Committee for the Prevention of Blindness.

"This," Mr. Carris said, "is the direct tangible loss shown by the report on compensation statistics for the year ending June 30, 1926, just received from James A. Hamilton, Industrial Commissioner of New York State. The report shows that 349 employees suffered total loss of the sight of one eye, that 363 additional employees suffered partial but permanent injury to one eye, that seven employees completely lost the sight of both eyes, and that these accidents resulted in an estimated loss of 70,000 weeks of working time. The accidents were caused by cuts, punctures, and lacerations of the eyes, and by burns from the splashing of molten metal and injurious chemicals.

"Officials of the National Safety Council and officials of insurance companies estimate that the indirect cost of accidents is four times as great as the direct cost. On such a basis it would appear that the eye hazards of the industries of this State are costing employers—and through them the general public—approximately $5,000,000 a year. It is the belief of the National Committee—a belief based on a study of the accident-prevention methods and accomplishments of a score of industries—that the major portion of this loss and of the human suffering growing out of these accidents is preventable and, therefore, wholly unnecessary.

"There are available protective devices for machines and men which, if properly used, would anticipate a great majority of eye injuries. Many of these devices are nonpatented, and can easily be made in any workshop. There is now available to any employer detailed information concerning the methods, educational and otherwise, which have enabled other employers to wipe out or greatly reduce the frequency and severity of eye accidents in their plants.

"A nation-wide study of the eye hazards of industrial occupations conducted by the National Committee shows that the American Car and Foundry Co., the Pennsylvania Railroad, the Ford Motor Co., the General Motors Co., the Pullman Co., the United States Steel Corporation, and other industrial concerns with reputations for keen business judgment have spent together hundreds of thousands of dollars for the protection of the eyes of their employees. These companies would not have spent such amounts for eye protection and would not continue to spend additional large sums year after year if they were not convinced by actual experience in their own plants that it is cheaper to prevent eye accidents than to pay for them.

"It is the belief of the National Committee that the greatest possibilities for the elimination of the eye hazards of industrial occupations lie not so much in mechanical devices and appliances as in education—education of the state as to its moral and economic obligations; education of the employer as to the desirability, from his own point of view, of supplying adequate protection for the eyes of his employees; and education of the employee, particularly the old-fashioned and so-called hard-boiled employee, as to the necessity of using that protection when it is provided."

HOSPITAL ACTIVITIES

Is An Architecturally Isolated Building Essential for a Lying-In Hospital?—Under this caption Dr. J. Whitridge Williams takes issue with Dr. De Lee in the contention that the maternity should be housed in a separate building as the only safe way to prevent cross-infection. Basing his arguments on practical experience, Dr. Williams points out that architectural isolation is not needed as a safeguard against infection, provided that the services of the hospital are well arranged and that rigid aseptic technic is carried out,

and if such technic be lacking even complete isolation will be of no avail.—*Modern Hospital.*

Warning to Hospital Superintendents.—Are you ready, Mr. Superintendent, to respond instantly to a call for help, should a disastrous railroad wreck, a building collapse, or a desolating fire occur in your community? Is the emergency box, containing dressings and medicines for at least fifty injured men or women, conveniently placed, and have the resident staff and ambulance chauffeurs been given instructions as to the location of the ambulance and its use, in case of urgent need? It would seem wise not to rely on the occurrence of the need—when minutes might mean lives—before beginning to collect these necessary articles.—*Modern Hospital.*

How One Superintendent Reduces Accounts Receivable.—As the problem of collecting hospital accounts is a difficult one for many superintendents, the methods used by other hospitals are of interest, even though policies differ with localities and the individual institution. The superintendent of a 100-bed institution has a method which has proved effective in her particular hospital. Once a month she makes the practice of turning the old accounts over to the finance committee of the board of trustees. Accounts are turned in for each physician showing the number of patients he has had, together with the number of unpaid accounts. Before pay patients leave the hospital they sign a judgment note calling for 6 per cent interest on the part of the bill left unpaid. This system has cut down the outstanding accounts to a large extent, and, according to the superintendent, patients are not offended at this procedure.—*Modern Hospital.*

The Medical Education and the Hospital.—The preliminary report of the Commission on Medical Education presented by Dr. Willard C. Rappleye at the recent Congress of the Council on Medical Education and Hospitals of the American Medical Association, in Chicago, emphasizes the importance of the rôle that our institutions play in the education of the young physician and their influence in shaping the practice of medicine. The many scientific advances that have been made in the field of medicine in recent years have made it almost impossible for the physician to render competent and complete service, especially in the case of serious or puzzling illness, except in the well-equipped and manned hospital. The specialization that is found in our institutions, the consequent division of responsibility for the care of the patient, the degree of reliance for diagnosis upon laboratory procedures, radiographic examinations, and various mechanical devices, and the use of elaborate therapy equipment only too often create an impersonal and harshly scientific attitude toward the patient and produce in the mind of the young medical graduate an erroneous idea of his responsibilities concerning the patient. From the time he enters the medical school until he leaves his internship, the student has no opportunity to see the practice of medicine as a whole. He is hesitant about entering individual practice under conditions that do not provide all these highly organized and technical services, and should he still possess the courage to do so, finds himself unprepared to meet the responsibility for the entire care of his patient.

What is needed is not less of science but rather more of human understanding. We need to imbue our students and graduates with the ideals of their profession and with the necessity of understanding that man is a social being and therefore that all illness and injuries have a social aspect. Our hospitals have a definite responsibility in the solution of the difficulties confronting medical education. Our attending medical men must so develop their practice and teaching that the intern will regard the many modern aids to diagnosis as confirmatory evidence, essential to a degree in the serious or obscure case, but to be used with judgment and discretion and only after he has utilized to the utmost his God-given senses. Hospitals must recognize their responsibility toward education by providing organized instruction for the intern in addition to the service which they demand from him, by fostering graduate instruction for their staffs and for the physicians in their vicinity through the development of intensive courses and programs that utilize the services of members of the faculties of the medical colleges, and through participation in the extension courses which are being promoted by a number of the state and local medical societies—*Modern Hospital.*

Does the School of Nursing Pay?—In view of the difference of opinion that exists with respect to the economic advantages and disadvantages of maintaining the hospital nursing school, the experience of the Columbia Hospital for Women, Washington, D. C., is of interest. The school of nursing was discontinued July 1, 1925. Regarding the results of the discontinuation of the school, the sixtieth annual report of the hospital, recently issued, comments that lack of a nursing school has proved more expensive than was expected. According to the report, at the time this action was decided upon the increased expense was estimated at $20,000 per year, but the experience of the year past indicated that it was nearly $30,000. Salaries for graduate nurses during the past year cost $1.4316 per patient day, or approximately $1 more than a nurse-training school. Regarding the cost of graduate nursing service, Dr. W. P. Morrill, superintendent of the hospital, says: "I regard $1 per patient day as about the difference in cost in nursing with graduates and pupil nurses. The maintenance cost of graduates is of course just as high as that for pupil nurses and the number of graduates needed is not many less." The report further states that although the discontinuance of the school of nursing has not lowered the character of care given the patients, the absence of formal teaching has hurt the morale of the nursing force and discouraged the alumnæ.—*Modern Hospital.*

How Long Does the Graduate Nurse Remain Professionally Active?—In an effort to learn what percentage of the nurses graduated from hospital training schools remain in the profession, and in what classifications they serve, as well as the percentage who leave the profession, an intensive study of the situation in this country was made by *Modern Hospital*, and published in the April number. This article is based on the study made of seventy-two hospital training schools answering the questionnaire, the results of which show the following percentages of graduate nurses according to occupation: Married or retired, 38.80; dead, 4.81; private-duty nursing, 30.98; institutional, 12.64; public-health nursing, 6.70; and other activities, 4.26. While this study is not presented as a final analysis of the situation, the percentages obtained give an accurate cross section of graduate-nurse distribution.

Special Training for Hospital Librarians.—That the hospital library is an essential part of the hospital is now becoming generally recognized, and the librarian in charge, to be of greatest benefit to the patient, must be capably trained. Where the hospital is of 200 beds or more, the public libraries of the cities generally assign a trained librarian to the individual hospitals. In order to make available specially trained librarians

for hospital work, the University of Minnesota, Minneapolis, Minn., has adopted a course of study for hospital librarians. The course includes three years of academic work with emphasis upon languages, English courses, social sciences, and history. The fourth year is given over almost entirely to library training, and the fifth to specialization in hospital needs and practices. The course includes full training in the therapeutic value of reading, hospital-library administration, literature for use of hospital groups, and field work in the hospital library.—*Modern Hospital.*

Through the Patient's Eyes.—To see our hospital selves as "ithers see us," while perhaps sometimes startling, would always be both personally illuminating and beneficial to the institution that we serve. This self-inspection does not refer wholly to the personal traits of any individual, but to the habits, attributes, and customs of the hospital itself. To become rutted is fatal. To live continually too near to the hospital's daily work is equally fatal to progress. "Why," one patient asked, "is it necessary to wake me so early in the morning, when I have nothing to do but be ready for the ten o'clock diathermy treatment?" Such questions are difficult to answer, unless one hazards the statement that such is the hospital's rule, that temperatures and breakfasts must be finished by an early hour. To attempt to answer why another patient was wakened to take his medicine, which later turned out to be a sleeping potion, would be just as difficult. Is there too much routine in the work of our hospitals? Is the individuality of each patient being considered, in so far as possible, in regard to each detail of his hospital life which may range from food to occupational therapy? The patient cannot understand that he is unreasonable when he insists that a certain medicine is poison to him. Nor does he wish to be intentionally caustic when the expected happens after his remonstrances have been overruled. It would be obviously impracticable to set up a separate routine for each patient, and yet could not the individual peculiarities of the sick man be just a little more a matter of serious consideration? It would be folly of the grossest sort to suggest that the desires of the patient be seriously consulted in matters that concern the progress of his diagnosis or treatment. On the other hand, accession to many of the requests of the patient, which, while without the usual routine, are in reality trifling, often serves only to speed convalescence.—*Modern Hospital.*

ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION

Washington, D. C., May 16-20, 1927

Registration and Attendance

At the annual session of the American Medical Association in Washington, May 16th to 20th, there was a registered attendance of 6,273.

Outstanding Features

Among the outstanding features was an address by the President of the United States, Calvin Coolidge, who conferred high praise on the medical profession for its contribution to the social organization. The President and Mrs. Coolidge also held a special reception for physicians, on the White House lawn.

The publicity relative to the session in the newspapers of the country was the greatest ever given to an annual meeting of the Association. This is presumably a reflection both of the increasing interest of the public in the progress of medicine and of the coöperation between the American Medical Association and the American press.

House of Delegates

The following statement concerning the proceedings of the House of Delegates is not in any sense complete. A fuller outline has already appeared in the *Journal,* and the complete record will be printed in the official "Proceedings."

At the first meeting of the House of Delegates, May 16th, the Speaker, Dr. F. C. Warnshuis, urged continued attention to the problems of nursing education and nursing service in the United States. He suggested an attempt to solve the question of the requirements, qualifications, and standards for a capable, competent surgeon and a means to aid the public in making such an identification. He also urged state licensure and special hospital legislation as a means for protecting the public against poor and incompetent institutions.

The President of the Association, Dr. Wendell C. Phillips, urged continuous attention to the education of the public in matters of health. He suggested a proper system of censorship to safeguard medical publicity. He again recommended consideration of the restrictions placed on physicians in the prescribing of alcoholic liquors.

The President-Elect, Dr. Jabez N. Jackson, urged new attention to the problems of medical ethics, and the preparation of a manual which would make clear both to the profession and to the public the intent of the "Principles of Medical Ethics."

The President of the Association appointed a committee, consisting of Drs. Ray Lyman Wilbur, Rock Sleyster, G. E. Follansbee, Harlow Brooks, and William Allen Pusey to act on public responsibility, having to do with the relationship of the medical profession to the public.

On recommendation of the Judicial Council, the opinion was adopted that all articles of an educational nature on medical or health subjects intended for the lay press or lay audiences should give expression to the consensus of opinion of the medical profession rather than to personal views, and that such articles should appear preferably under the auspices of the American Medical Association or of one of its component county societies or constituent state associations.

Report on Medical Education

In considering the report of the Council on Medical Education and Hospitals, the House of Delegates adopted the report of its reference committee. This committee considered as overoptimistic the views of the Council that the present medical schools are adequate to supply places for those wishing to enter a medical school. The reference committee believed that the Council on Medical Education might devote more attention to the problems of the supply of physicians and the question of medical care in rural districts, to the preparation of a statement on the defects in the present situation, and to similar subjects.

The reference committee considered it necessary that the present curriculum be reduced materially, and that any consideration of a new curriculum should give special attention to the training of general practitioners, with brief courses in the more important specialties. The recent decision of the Council to recognize as suitable for internship only hospitals in which there is a minimum percentage of necropsies was approved and recommended.

Investigation of Heroin

The reference committee on legislation and public relation requested the Board of Trustees of the American Medical Association to have another investigation of the use of heroin made by the Council on Pharmacy and Chemistry in conjunction with some of the scientific sections.

Evaluation of Remedies

It was recommended that the Association condemn as unwise and futile any attempt to evaluate a therapeutic agent by legislative fiat, referendum, popular vote, or any similar method. The conclusion was adopted that such evaluation can be made only by the investigation and decision of experts.

Disaster Relief

A consideration of the report of the committee on disaster relief resulted in the adoption of a recommendation that the American Medical Association urge constituent associations and component societies that have not already established disaster relief committees to do so as soon as possible.

Mortality Statistics

It was urged by the adoption of a report of the reference committee on hygiene and public health that the attention of the United States Census Bureau be called to the impossibility of comparison of statements on maternal mortality of the various nations, and that the bureau be urged to secure a strictly uniform definition of maternal mortality by the bureaus of vital statistics of various nations.

Cosmetics

A resolution urging Congress to enact a law to control the manufacture, distribution, sale, and commercial use of toilet preparations for preserving and enhancing personal beauty was referred to the Board of Trustees for action.

Education of Surgeons

The reference committee on the speaker's address commended the section having to do with the duty of the American Medical Association to standardize and elevate the practice of medicine and surgery within and without hospitals through its own organization, but not through legislative or other agencies.

Appointment of Delegates

The reference committee urged that state societies appoint delegates in time to permit the speaker of the House of Delegates to announce the reference committees thirty days in advance of the session, so that these committees might give adequate attention to the various reports of officers and councils before the time of the session.

Health Conferences

The importance of health conferences was recognized and attempts to reduce the duplication of efforts in various fields were encouraged.

Contract Practice

The report of the Judicial Council of the American Medical Association to the effect that there were both ethical and unethical contracts possible, and that each contract must be judged on its own merits was approved by the committee and adopted by the House of Delegates.

Charges for Services to Insurance and Indemnity Companies

A resolution to the effect that physicians were not under any obligation to provide information to insurance or indemnity companies unless paid the usual fees charged for similar services to private patients was approved and adopted by the House of Delegates.

Place of Next Annual Meeting

The Board of Trustees was asked to investigate places for holding the next annual session and to present its approval of two or more cities which, on investigation, have been found to possess ample facilities. The Board of Trustees has authority to change the place of holding the session if for any reason it is deemed advisable.

Income Tax Deductions

A resolution requesting the promotion of an amendment to the revenue bill relating to income tax, which gives the individual a right to deduct from his income tax the expenses of medical treatment for himself and family was referred to the Board of Trustees, with the suggestion that they in turn transmit it to constituent state societies for action.

Nursing Action

Reports of the various committees on nursing education were received by the House of Delegates, and it was recommended that the American Medical Association give support in the work of the committee on grading of nursing schools and share in its financial program. The Board of Trustees appropriated the sum of $5,000 for one year toward this end.

The Physicians' Home

A special committee reported on the need of a physicians' home. The committee recommended that the Secretary of the Association be requested to secure full information in regard to what is now being done by the profession for aged and incapacitated physicians in various states and cities, so that other states of component societies may take measures to afford relief for dependent, worthy physicians, their widows and their orphans who may be in need. It was recommended that the Secretary make a report on this matter at the next annual meeting. The committee was convinced that the need for a national home is not sufficient to warrant the American Medical Association in establishing, managing, and sustaining a home.

Collaboration With Health Officers

Collaboration between physicians and health officers was urged as the only method of meeting the public-health situation for the good of the profession and the public.

Trachoma Among Indians

The American Medical Association was urged to continue its affiliations with all the activities of the United States Government in the work being done by the National Committee for the Prevention of Blindness for the elimination of trachoma among Indians.

Legislation for Coördinating Government Health Activities

The House of Delegates reaffirmed its approval in principle of the Parker Bill, coördinating the health activities of the Federal Government under the direc-

tion of the United States Public Health Service. It also adopted the report of the reference committee recommending approval of the Ransdall Bill, appropriating $10,000,000 to establish a national institute of health under the control of the Surgeon-General of the United States Public Health Service.

Disabled Emergency Medical Officers

The House of Delegates reaffirmed its favorable action of 1922, requesting the passage of the Bursum Bill, which relates to the retirement of disabled emergency army medical officers on a parity with all other classes of disabled officers of the World War now on the retired list.

Medicinal Liquor

The report of the reference committee of the House of Delegates to the effect that hereafter the House of Delegates shall not pass any resolution pertaining to the therapeutic value of anything and that no committee report empowering any such resolution shall hereafter be presented until it has been considered by the Council on Scientific Assembly and the Council on Pharmacy and Chemistry was adopted. Recommendation was made that the special committee on alcoholic liquors be continued and be directed to coöperate in preparing a bill to be presented to Congress correcting the unfortunate provision of the Volstead Act limiting the amount of alcohol used, and providing such regulations as will permit doctors to prescribe whatever amounts of alcoholic liquors may be needed for their patients, and subject to such reasonable restriction as may be thought wise and best after a conference with the head of the Prohibition Department.

It was also urged that the American Medical Association declare its adherence to the principle that legislative bodies composed of laymen should not enact restrictive laws regulating the administration of any therapeutic agent by physicians legally qualified to practice medicine.

A supplementary report of the Judicial Council recommended that "Every resolution presented relating to the alcohol question shall be referred to the Board of Trustees for investigation." The recommendation was adopted by the House of Delegates.

Caustic Poisons

The House of Delegates approved the resolution extending to members of Congress the thanks of the American Medical Association for passing the Caustic Poison Act in 1927.

Form Letters on Periodic Physical Examination

A resolution asking the Board of Trustees to prepare approved forms of letters or literature which may be sent out by county medical societies to the public to promote the value of periodic health examinations and information that the examinations can be made and records kept by qualified physicians who are members of the American Medical Association, in this manner helping to circumvent the harmful advertising activities of commercial agencies dealing with periodic health examinations, was endorsed by the reference committee and adopted by the House of Delegates.

Contraception

A resolution recommending the alteration of existing laws, wherever necessary, so that physicians may legally give contraceptive information to their patients in the regular course of practice was referred to the Board of Trustees of the Association.

Health Hazards in Industry

The resolution petitioning Congress to make possible an increase in the personnel and resources of the United States Public Health Service in order that the service may extend its activities in the field of industrial hygiene was referred to the Board of Trustees.

Amendments to the By-Laws

Notices of proposed amendments to the By-Laws: (1) defining the powers of the Judicial Council; (2) defining the legislative powers of the Association and the right of the House of Delegates to expel members or Fellows on recommendation of the Judicial Council; (3) a resolution changing the members of the Council on Medical Education and Hospitals was presented and must lie over to 1928 for action.

Woman's Auxiliary

A motion that the House of Delegates request the Board of Trustees to appoint a liaison committee between the American Medical Association and the Woman's Auxiliary was adopted.

Election of Officers

In the election of officers, Dr. William S. Thayer, of Baltimore, was elected President of the Association; Dr. Charles A. Elliott, of Chicago, Vice-President; Drs. Olin West, Secretary, and Austin A. Hayden, Treasurer, were reëlected, as were also the Speaker, Dr. Frederick C. Warnshuis, of Grand Rapids, Mich., and Vice-Speaker, Dr. Allen H. Bunce, of Atlanta, and the Trustees, Drs. Edward B. Heckel, of Pittsburgh, and Rock Sleyster, of Wauwatosa, Wis.

The president, Dr. Jabez N. Jackson, made the following nominations to appointments on the various councils: For the Judicial Council, Dr. Donald McCrae, Jr., Council Bluffs, Iowa, and Dr. Frank Cregor, of Indianapolis, to succed Dr. Thayer; for the Council on Medical Education and Hospitals, Dr. Emmett P. North, St. Louis; for the Council on Scientific Assembly, Dr. Frank H. Lahey, of Boston. These nominations were confirmed.

The Scientific Sections

More than three hundred manuscripts were read in the sixteen scientific sections of the Association, covering many medical subjects. A complete list of the papers read with the names of the persons discussing them appear in the *Journal of the American Medical Association* for June 11, 1927, beginning on page 1896. —*A. M. A. Bulletin.*

ULTRAVIOLET RAYS FOR COWS

Now cows, as well as babies and children, are to be given treatment with artificial sunlight. Recent investigations have shown that feeding children certain foods, especially milk, that have been exposed to ultraviolet rays is as effective in curing the children of rickets as exposing the children themselves to the rays.

During the summer when the cows get plenty of these rays from the sun, their milk is rich in curative materials. In the winter the cows get little sunlight. So it is proposed by a London authority to give them ultraviolet rays from some form of lamp and to feed their milk to sickly children.—*Hygeia.*

THE MEDICAL SOCIETY

OF THE STATE OF PENNSYLVANIA

OFFICERS' DEPARTMENT

WALTER F. DONALDSON, M.D.
Secretary
8062 Jenkins Arcade Building
Pittsburgh, Pa.

CALL TO THE 1927 SESSION

The first meeting of the 1927 House of Delegates of the Medical Society of the State of Pennsylvania will be called to order in the French Room, second floor of the Hotel Schenley, Pittsburgh, on Monday, October 3, 1927, at 3 p. m.

THE 1927 SCIENTIFIC PROGRAM

The 1927 scientific program, completed May 10th and finally assembled June 15th, will be published in the August number of the JOURNAL. The programs of the seven sections are replete with symposia, case reports, "guest" papers, and a contribution from each section to the Scientific Exhibit. The program gives promise of a rare opportunity for three days' intensive graduate work.

MEDICAL BENEVOLENCE

We gratefully acknowledge a contribution of $25 to the Medical Benevolence Fund from the Northumberland County Medical Society, and a pledge of $25 from Dr. Henry D. Jump, Philadelphia.

MEMBERSHIP LIST

The 1927 membership list, as of July 1st, containing the names and addresses of the members of our sixty-three component county medical societies in good standing at that time, will be printed and distributed this month among the proper officers of the county societies. A copy of the list will be forwarded to any member upon request made to the Secretary's office, Jenkins Arcade Bldg., Pittsburgh, or the JOURNAL office, 230 State St., Harrisburg. The list includes also the officers and committees of all component societies. The published list each year is bound with the ATLANTIC MEDICAL JOURNAL for the fiscal year and filed in the archives of the Society and in the office of the Secretary.

LIAISON OFFICERS

At a recent conference of the officers of the New York, New Jersey, and Pennsylvania Medical Societies, held in Scranton, a subject for informal discussion was "How Do You Maintain Contact Between the State Medical Society and its Component Societies?" The reply of the representatives from the New Jersey and New York Societies was "Largely by means of visitation from our full-time Executive Secretary." Pennsylvania's reply was "Very largely by the sacrificial services of the President-Elect and the President."

Since 1921 it has been the custom for the President-Elect and the President of our State Society to attend, in addition to meetings of the Board of Trustees and Councilor District Meetings throughout the State, meetings of from forty to fifty component county societies. Since last October, President-Elect Morgan has visited twenty-six county societies.

The President-Elect and the President are frequently able, through arrangements made by this office, to visit four county societies in three days. The officers of most county societies—the recipients of such visits—freely testify to the resultant stimulating effect, and invariably report "eager anticipation of next year's presidential visit."

The writer freely gives credit to the growing list of circuit-riding presidents for the gratifying degree of solidarity existent between the Medical Society of the State of Pennsylvania and most of its component societies.

CHANGES IN MEMBERSHIP OF COUNTY SOCIETIES

The following changes have been reported to June 15:

ADAMS: *Transfer*—Donald B. Coover, Littlestown, from Cumberland County Society.

ALLEGHENY: *New Members*—Howard A. Power, William E. Kuchenmeister, 4715 Fifth Ave., Pittsburgh. *Deaths*—J. Clarence Caldwell, Butler (Univ. of Pgh., '95), suddenly, June 7, aged 60; Karl A. Emmerling (Jeff. Med. Coll., '90), May 6, aged 59.

CARBON: *New Member*—Susan Tomchik, 259 E. Ridge St., Lansford.

CAMBRIA: *New Member*—Max S. Kaplan, 10th St., Barnesboro.

CHESTER: *Transfer*—William Evans, West Chester, from Philadelphia County Society. *Death*—Edward Kerr, East Downingtown (Univ. of Penna., '90), recently, aged 59.

DAUPHIN: *New Member*—Herman H. Hostetter, Hershey. *Death*—Charles C. Cocklin, Harrisburg (Univ. of Penna., '94), May 7, aged 66.

DELAWARE: *New Member*—Ralph E. Powell, 40 E. 10th St., Marcus Hook. *Death*—Morton P. Dickeson, Media (Med. Chir. Coll., '88), May 9, aged 63.

INDIANA: *Removal*—Edward A. Haegele, from Heilwood, to 1012 E. Broad St., Hazleton.

LANCASTER: *Reinstated Member*—David G. McCaa, 1130 Elm Ave., Lancaster.

LAWRENCE: *Removal*—M. A. Swaney from Wampum to 220 N. Liberty Ave., Mahoningtown Station, New Castle.

MERCER: *New Members*—Sigmond J. Shapiro, Arcade Bldg., Farrell; Edward N. Hagin, 233 E. State St., Sharon.

MONTGOMERY: *New Member*—Carl W. White, Narberth. *Removal*—Henry N. Scholl from Kissimmee, Fla., to Green Lane (Montgomery Co.).

PHILADELPHIA: *New Members*—Edward L. Bortz, 315 S. 16th St.; James P. Sands, Friends Hospital, Frankford; George Willauer, 5919 Greene St., Germantown; A. Robert Bauer, 5237 Spruce St.; Dale W. Garber, 6618 Woodland Ave., Philadelphia. *Reinstated Member*—Thompson S. Westcott, 1720 Pine St., Philadelphia. *Resignation*—Charles F. Branch, Boston, Mass. *Removal*—Emanuel M. Sickel from Philadelphia to 230 Main St., Lakewood, N. J.

SOMERSET: *New Members*—Elmer E. McAdoo; Somerfield; Jacob T. Bowman, Somerset.

SCHUYLKILL: *New Member*—Henry Dirschedl, Pottsville. *Removal*—Clemens S. Burke from Pottsville to 200 E. Mahanoy Ave., Mahanoy City.

SUSQUEHANNA: *Removal*—J. P. Coll, Susquehanna, to Milford (Pike Co.).

WASHINGTON: *New Member*—John A. Douglas, McDonald. *Transfer*—Clayton B. Mather, Midway, from Lycoming County Society.

YORK: *Removal*—Walter R. Livingston, Glenville, to Farnhurst, Del.

PAYMENT OF PER-CAPITA ASSESSMENT

The following payment of per-capita assessment has been received since May 14th. Figures in the first column indicate county society numbers; second column, State Society numbers.

May 20	Lackawanna	227	7505	$5.00
	Elk	23	7506	5.00
	Cambria	162	7507	5.00
	Venango	53	7508	5.00
	Somerset	48–49	7509–10	10.00
	Westmoreland	155	7511	5.00
June 1	Bradford	36	7512	5.00
2	Carbon	26	7513	5.00
	Lancaster	144	7514	5.00
4	Montgomery	155	7515	5.00
	Allegheny	1270–1277	7516–23	40.00
10	Dauphin	165	7524	5.00
	Washington	137	7525	5.00
11	Erie	142	7526	5.00

COMMITTEE ON SCIENTIFIC WORK

THOMAS G. SIMONTON, M.D., *Chairman*
Pittsburgh, Pa.

PROGRAM OF THE SECTION ON PEDIATRICS

The pediatric program presented at the State Society meeting to be held in the "Smoky City" October 3d to 6th will be worth traveling far to hear. Besides that, the session will be held in the Schenley Hotel, which is located in the educational, cultural, and social center of the city, and the Committee on Arrangements has spared no effort to make the meetings both pleasant and profitable. With all due respect to programs in the past, the officers of the Section on Pediatrics do not hesitate to say that the one arranged for the 1927 meeting will climax them all. Read the following, and judge for yourself:

The first session will be a clinic held on October 4th at 2:00 p. m. at the new Children's Hospital. The first hour will be devoted to orthopedic conditions, viz., "Postural Defects as They Affect the General Health," and will be in charge of a man whose ability is outstanding and whose name you all know. Following this, an hour will be divided between the discussion and demonstration of "Early Nervous Manifestations of Several Common Pediatric Conditions," and discussion of "Specific Vaginitis," with demonstration of methods of treatment. The final hour will be devoted to presentation of some unusual cases and a moving-picture demonstration of some interesting pediatric conditions. Immediately following the clinic, an opportunity will be given to inspect the new Children's Hospital.

Believing that the best way to promote interest in any group is to encourage mutual acquaintance, the officers of the Pediatric Section have arranged a Section Luncheon to be held at the University Club on Wednesday, October 5th, at 1:00 p. m. Do not miss this opportunity to get together and renew old and make new acquaintances. The guests of the Section will be there, and besides being good pediatricians, they are charming men to meet.

Following this luncheon there will be three hours of the best postgraduate work you have ever attended. To start with, there will be a "Symposium on the Newborn," handled by men of sterling quality. The next two hours will be devoted to a study of genito-urinary diseases at a joint meeting of the Sections on Pediatrics and Urology. The first hour will be devoted to a study of various types of affections of the urinary tract in children, presented by two men from each section. The second hour will be

divided between two of the most prominent men in the country, one representing each section, and occupying a half-hour each. This session alone should be worth coming to hear.

The final session will be held on Thursday, October 6th, at 9:00 a. m., and will begin with a "Symposium on Preventive Pediatrics." This subject will be discussed from different angles by an excellent group of men. The following hour will be occupied by a "Symposium on Light Therapy in Diseases of Children." This is a very timely subject, and will be presented in a masterly way.

Do not forget that you will be given the opportunity and encouraged to express your views on all these subjects for fifteen minutes in open discussion at the end of each period.

Case reports are always interesting, and the following hour will be devoted to presentation of eight 5-minute case reports on rare and interesting conditions.

Finally, "The Diagnosis and Treatment of Meningitis in Children" will be discussed by one of our distinguished guests. He knows his subject, and is able to tell it.

Keep this in mind: that every man in this State who is interested in pediatrics owes it to himself and to this Section to be present at all its sessions. Come and give us your ideas on the various subjects presented.

COMMISSION ON COMPENSATION LAWS

Lever F. Stewart, *Chairman*
Clearfield, Pa.

COOPERATION OF THE PHYSICIAN IN THE OPERATION OF THE PENNSYLVANIA COMPENSATION LAW

With the approach of the annual meeting of our State Society, the Commission again wishes to call the attention of the Society to the value of the physician's coöperation in the administration of the Compensation Law.

The physician's activity, in general, can be divided into two main branches: first, his efforts to improve the law; and second, his efforts to expedite the administration of the law by standardizing, in so far as possible, certain routine medical problems.

Previous issues have reviewed the physician's efforts to improve our Compensation Law. Further efforts must be continued until the time of the next session of our Legislature. In the meantime, a much better understanding of the entire problem can be gotten by a cordial coöperation between the administrators of the law and the Medical Society of the State of Pennsylvania—the representative medical organization of the State.

The Compensation Board and individual referees are constantly confronted with the task of determining what constitutes compensable disfigurement, compensable blindness, compensable hernia, compensable bursitis, compensable pneumonia, compensable apoplexy, compensable cardiac death, etc. It would seem certain that our Compensation Board and its referees would welcome a clearer definition of these things. It would be easily possible for the State Medical Society to define them more clearly. A committee could be named to form a liaison with the State Compensation Board. This committee in turn could submit its various problems to the various sections of the State Society under whose jurisdiction such problems would properly come. A question of what constituted industrial blindness could be decided by a committee of three ophthalmologists. An excellent decision on this question could be made by two ophthalmologists engaged in teaching and one engaged in industrial work. In this way, through the various scientific sections of our Society, each problem could be answered and standardized by the best medical opinion of our State.

The carrying out of such a plan would perform a real service to our State. It would bring about a better appreciation of unbiased medical opinion, and would lead to a better understanding as well as a closer coöperation between physician and Compensation Law administration.

County Society Reports

BERKS—MAY

Robert M. Alexander, M.D.: Diabetes.—This disease is due to failure of the islands of Langerhans to secrete insulin, resulting in an increase of connective tissue, sclerosis, and hyaline changes; also involvement of the acini.

Complications: In the first two years there is danger of acidosis; also in a diabetic patient suffering from an infection there is danger of acidosis at any time. Before we had insulin, all diabetic children died; now they can all live. Complications are divided into tonic and arteriosclerotic. In arteriosclerosis there is high blood pressure in nearly all patients past 50 years of age. Advanced cases usually show visual disturbances, due to foci of degeneration and hemorrhage in the retina. Acute iritis occurs, and cataracts are frequent in those having diabetes for ten years. Myocarditis is a constant companion of diabetes. Nervous changes, loss of knee jerks, and neuritis, gangrene, boils, carbuncles, skin eruptions, and otitis are symptoms. A patient with severe diabetes may not excrete any more sugar than one with a mild case. Some do not have glycosuria until their blood sugar approaches 300.

The diabetic problem is almost entirely one of diet. Sixty per cent are relieved by diet alone. How are we to know what patients need insulin? We put them on a test diet for four or five days. If they still show sugar in the urine, they need insulin, and should be put on a small dose, which is increased until the urine is sugar free. We teach the patients to estimate diets, examine their own urine for sugar, and give their own insulin. They return to the hospital monthly, and if they lose weight, we add to the diet; if they gain too much, we diminish the amount of their food. If the blood sugar indicates it, we change the amount of insulin.

Acidosis is caused by failure of the fats of the body to burn, and produces a feeling of drowsiness, weakness, numbness, and rapid respiration. These patients require prompt treatment with large doses of insulin and frequent blood-sugar tests. They must be given water, and kept warm. If unconscious, an intravenous injection of 20 grams of a 50-per-cent solution of glucose should be given.

The diet in children differs from that in adults. They require more heat units, since, because of the growing cells of the body, their metabolism is more active. Children of five years require 50 to 60 calories per kilogram of body weight, and should have from 2½ to 3 grams of protein per kilogram of body weight, because their protein intake must be proportionately larger. In abdominal surgery, with the use of insulin the wound will heal, except in the presence of infection. The tissues must not be handled roughly.

CLARA SHETTER-KEISER, M.D., Reporter.

BLAIR—MAY

About 125 doctors of Blair and surrounding counties attended a clinic held at the Altoona Hospital Tuesday, May 24th. Papers were presented by the staff members, as follows:

Medical—Dr. C. E. Robison: "The Incidence of Heart Disease." Dr. R. S. Magee: "The Cardiac Arhythmias." Dr. A. S. Oburn: "Septic Endocarditis." Dr. R. O. Gettemy: "Little's Disease." Dr. A. S. Kech: "The Serologic Treatment of Lobar Pneumonia." Dr. Frank Keagy: "Empyema in Children."

Surgical—Dr. J. H. Galbraith: "Acute Arthritis." Dr. A. J. W. Handwork: "Middle-Ear Disease." Dr. L. S. Walton: "Keratitis." Dr. J. S. Taylor: "Review of Obstetric Calamities." Dr. J. D. Findley: "Appendicitis." Dr. W. H. Howell: "Malignant Neoplasms of Uterus." Dr. H. F. Moffitt: "Gonococcic Infection in the Female."

X-Ray—Dr. G. D. Bliss: Lantern-slide and Film Demonstration.

Laboratory—Dr. G. E. Boesinger.

R. V. SILKNETTER, M.D., Reporter.

LUZERNE—MAY-JUNE

A regular meeting was held in the Society Building on May 24th, with President G. R. Drake in the chair. The essayist was Dr. H. Brooker Mills, of Philadelphia, professor of pediatrics at Temple University, speaking on "Some Therapeutic Suggestions in Infancy and Childhood."

Dr. Mills's treatment of pneumonia in the child consists of rest in fresh air with good nursing. The air does not need to be cold. A warm fresh air is better than an extremely cold fresh air. He uses water within and water without. At the beginning of the infection he recommends a course of calomel and salts. The cough is protective and does not necessarily call for cough mixtures. Nor are fever mixtures indicated. There is no need of using stimulants routinely or in the early stages. For circulatory distress, strychnin is best; for respiratory distress, atropin. These are withheld until urgently indicated. Mercurochrome intravenously is the best drug to counteract the infection, and Dr. Mills is convinced it has done good in pneumonia, meningitis, and other acute infections. He advocates lumbar puncture in pneumonia for continued hyperpyrexia, especially when there is any suspicion of meningeal irritation.

In laryngitis, a moist atmosphere is desirable, and he keeps the steam kettle going continuously in the room with the patient. Ipecac is the best drug for internal use. The best treatment of tonsillitis is prevention. He uses hot saline gargles, and occasionally antipyretics. Dr. Mills pointed out the relationship he has observed between sore throat and appendicitis in children. A child with appendicitis may have had the tonsils out and still have had an antecedent sore throat shortly prior to the abdominal attack. Often these "acute appendices" are not an inflammation of the appendix at all, but inflamed glands in the region of the appendix. In the colipyuria of infancy and childhood (the newer term for the old pyelitis), much success has been had with hexyl-resorcinol given in solution.

Para-thor-mone given intravenously in the lowered calcium content of tetany and rickets has a marked effect in raising the calcium level. Rickets with low blood calcium must be distinguished from rickets with low blood phosphorous. The dose of para-thor-mone is 0.5 c.c. intravenously. Five days are allowed to elapse, when a blood-calcium determination is made. If indicated by the result, the dose is repeated. The extract must be used with caution, because there is no antidote for it.

A simple acidified-milk formula for infants is made by boiling one quart of milk five minutes, skimming off the scum, adding two teaspoonfuls of vinegar and two tablespoonfuls of Karo corn syrup, the entire amount to be set away in the ice-box.

As soon as the umbilical cord is cut, the baby should be turned over to the pediatrician. Obstetricians have not learned this lesson.

Dr. Dattner: I do not know the advantage of lumbar puncture in pneumonia. I question the use of calomel in pneumonia. In the early stage I should think there would be danger of intussusception or obstruction of the bowel because of the relaxation due to toxicity early in the disease. Acidified milk is being used more today than anything we have been using in modified milk.

Dr. Long: As I listened to Dr. Mills's paper recommending calomel, rest, and nursing in pneumonia, I thought I was sitting on the benches forty years ago listening to my old teachers. I would ask if he treats influenzal pneumonia in the same expectant way as he does lobar and bronchopneumonia. I am surprised that after his nihilistic remarks about pneumonia, he speaks about mercurochrome as he does in its treatment.

Dr. C. H. Phillips: It is a very real evening when we have so much common sense as we have had given us tonight. It seems to me that the more difficult a subject can be made, the more attractive it is to many speakers. A paper of common sense, such as this, is very valuable, as we are tending to be carried away by too much science. I was particularly impressed by Dr. Mills's story of the child who will not eat. If a child will not eat, it is one of the best reasons in the world why he should not eat.

Dr. Mills: There are few if any diseases where the child is more toxic than in pneumonia. Any way in which you can relieve that toxicity is justified, whether by sweating, by purgation (which methods are weakening), or by colonic irrigation (which is one of the preferable ways). But I know of few more direct means of warding off meningeal irritation than lumbar puncture.

About calomel in pneumonia: what worse complication is there in treating pneumonia in a child than tympanites? Nothing will give more trouble, either to avoid or get rid of, than tympanites. When it develops, only one thing will do good, and that is a 5-minim dose of pituitrin. I have yet to see a provisional course of calomel, given in fractional doses, finely made up in powder form, and combined with benzoate of soda (not bicarbonate) do anything but exceptional good.

Dr. Mills added some remarks on the general subject of administration of remedies and of children's diets, emphasizing the desirability of allowing the child to eat what he wants if he is hungry and really desires food, and of not forcing food that is not desired or needed. Good digestion and assimilation of food depend more upon good appetite and need for food than upon the nature and amount of food.

So far as treatment is concerned, pneumonias are the same despite variation in the infecting organisms and pathologic processes. He treats an influenzal pneumonia the same as he would lobar or bronchopneumonia.

The meeting of June 1st was held in the Society Building, with President G. R. Drake in the chair. Drs. Mengel, S. M. Wolfe, and Doyle were elected delegates to the Pittsburgh meeting of the State Medical Society; Drs. Lewis Edwards, G. E. Baker, P. P. Mayock, N. Ross, A. Trapold, Jr., and W. J. Davis, alternates; and Dr. H. B. Gibby, district censor. Resolutions were read in memory of the late Dr. Joseph L. McGinley.

Dr. William D. Stroud, Philadelphia: The Treatment of Cardiovascular Insufficiency, with Special Reference to Auricular Fibrillation.—The MacKenzie-Lewis school of cardiology has led the way from making diagnoses of cardiac disease on auscultatory signs alone. We must first determine the etiology in order to make a full diagnosis on the basis of the outline in "A Nomenclature for Cardiac Diagnosis" approved by the American Heart Association. Many children are born with murmurs or abnormal heart sounds due to slight developmental defects which never in any way produce embarrassment to the circulation. These murmurs may be loud and widely transmitted, but so long as there is no evidence of an active infection, enlargement of the heart, nor circulatory insufficiency, they may be treated as practically normal individuals. Typically congenital heart cases, with clubbed fingers, cyanosis, and maldevelopment, still have the same unfavorable prognosis. Children with definite cardiac infections must be carefully watched. These include the cases with recurrent tonsillitis, "growing pains," typical acute rheumatic fever, chorea, diphtheria, or syphilis, also cases of subacute infective endocarditis. Improved hygienic measures, proper diet, and heliotherapy, with removal of diseased tonsils and teeth, will certainly improve the general physical condition and may lessen the number of exacerbations and minimize the extent of the cardiovascular damage.

In the group of patients with generalized arteriosclerosis, coronary disease, angina pectoris, etc., a family history is of assistance in instituting early preventive measures through regulation of diet, insistence on sufficient hours of rest, relaxation, and play, with proper renal and gastro-intestinal elimination. It is the experience of the average specialist that it is the lack of insistence upon these detailed preventive measures by the family physician which causes the average patient to seek aid from a specialist. There is a common misconception among our patients that if there is anything wrong with the heart, even a sinus arhythmia or an occasional extrasystole, they feel sure they may drop dead any minute.

Practically all cases of congestive cardiovascular failure with auricular fibrillation must be treated with rest, diet, and full digitalis therapy. The amount of digitalis is regulated by the *apical* rate, not the *pulse* rate, at which each individual patient's circulation is found to be most efficient. The "circus" theory of cardiac innervation supposes the impulse to originate at the sino-auricular node, thence to spread through the wall of the auricle to the a-v. node and the bundle of His to the ventricle. In auricular fibrillation these orderly impulses are replaced by fibrillary contractions of individual auricular muscle fibers or groups of fibers, and only a few get through to the ventricle. Digitalis slows the rate by stimulation of the vagus and blocking of some of the abnormal impulses through the auriculoventricular bundle. It prolongs diastole. When fully digitalized a decision must be reached as to whether an attempt to secure a return to normal sinus rhythm with quinidin sulphate is practical for that individual patient.

Dr. Bixby: Is it important in the use of quinidin sulphate to follow the heart action with the electrocardiogram?

Dr. Stroud: In treating auricular fibrillation with quinidin sulphate, you can do it well if you put the patient to bed, even without the galvanometer. The danger signals are those of quinin poisoning.

LEWIS T. BUCKMAN, M.D., Reporter.

MERCER—MAY

The stated meeting was held Thursday evening, May 12th, at 6:30 p. m., at the Shenango House, where dinner was served.

Dr. Arthur C. Morgan, president-elect of the Medical Society of the State of Pennsylvania, was the guest of honor, and made an address on "The Treatment of Acute Cardiac Tragedies."

EDITH MACBRIDE, M.D., *Secretary.*

PHILADELPHIA
May 11, 1927

Dr. Charles W. Burr: Suicide in the Adolescent; Its Cause and Prevention.—Suicide is something more than voluntary self-murder; purely selfish motives are actuating. The man who kills himself from duty, to benefit others, is not a true suicide. That form of suicide which is alleged to be increasing in the United States is found in youthful persons who, without previous evidence of mental disease, unable to withstand the battle of life, kill themselves. Assuming that there has recently been such an increase, we must ask why?

For a time the world will run along on a level, then will come sudden turmoil and mental unrest, and civilization must be readjusted. During the World War, when, in 1914, Russia was pre-revolutionary, the French ambassador to that country, noting the increase in suicide, foretold the coming upheaval. Until the Civil War, life in this country was quiet, on a level plane;

but with our rapid development, our floods of alien races, of people who had never been taught to rule themselves, with our tremendous wealth and the children of wealthy families who were not taught self-control, came generations, increasing year by year, of people not taught inhibition. Added to that came psycho-analysis, Freudian psycho-analysis that gripped our young people by the neck and gave to those who think they think, but don't, cause for suicide. Then too, there are increasing today ambitious parents who force a hand-minded child to an education and produce thereby a mental break, a moral rot, or—a suicide.

This will all come right, but only by sacrificing the unfit. Despite the artificial attempts to protect life, modern life, with its traffic problems, etc., in its own way eliminates the unfit. But what to do with these who will, if left to nature, end in suicide? We must return to the belief that to be a man, a boy must be taught self-control. It is an educational problem entirely, not medical, and not one for moral suasion. Real, solid punishment and the getting of nothing not worked for will save many men in generations yet to come.

Dr. Herbert Old, Assistant Medical Director, Provident Mutual Life Insurance Company: Life-Insurance Methods in Their Relation to the Practice of Medicine.—There are two kinds of evidence germane to life-insurance selection—clinical and statistical. The clinical is furnished by the medical examination, and much thought is given to the selection of the medical examiner, that he may be expeditious, quick in his detection of defects, and possessed of common sense. Personal contact is maintained between medical examiners and medical directors so that the former may know the outcome of their examinations. The actuarial department furnishes statistical evidence, acting much as the pathologist to the clinician. The tools it employs are mortality tables, the laws of average, and the results of compound interest.

Medical selection so weeds out the unfit that it is effective during the five years following examination. The insurance company is interested in the life expectancy of large groups, whereas the general practitioner is concerned with individuals. Life insurance mainly concerns itself with the potentialities and significance and progress of detected impairments, and any individual who has been declined by an insurance company should receive more attention from the general practitioner.

From the health-preservation department comes the information that of the policyholders who have availed themselves of its service, 23 per cent show one or more impairments; that 18 per cent of these could be eradicated by removal of foci of infection and proper hygienic and dietary measures; that 5 per cent are permanent; and that the more common conditions found are nephritis, cardiovascular changes, glycosuria, diabetes, and enlarged prostate. Such an examination practically adds five more policy years, and is of distinct service to policyholder, company, and family physician.

Another great development in the insurance field is the writing of a disability provision in the policies. Tuberculosis of the lungs causes the largest percentage of claims, accident next, and mental and nervous conditions third.

As to blood pressure, if the systolic pressure is more than 10 mm. above the average on several observations it evidences an increased mortality. From 5 to 15 points under the average, especially at age 40 or over, is favorable. If the pulse pressure is under 25 we think of incorrect observation or low vitality; if over 50, psychic influences, neurocardiac asthenia, goiter, aortic regurgitation, and incorrect observation. Systolic pressures run 5 to 10 mm. lower in summer than in winter. A persistent systolic of 146 mm. and a diastolic of 102 are significant of pathologic changes. In young applicants with high systolic pressure, psychic influences, albumin or sugar in the urine, and heart disease are eliminated. Low systolic pressure in young underweights, with a pulse of 90 or above, are significant of tuberculosis or some acute condition. In applicants 40 years or older, with a high systolic, and diastolic around 100, we examine carefully for signs of the cardiorenal complex, diabetes, and lues.

Dr. F. G. Brathwaite, Associate Medical Director, Equitable Life Assurance Society of the United States (by invitation): The Development of Substandard Insurance.—It became obvious after many years of selecting applicants for life insurance, that there was a need for the issuance of insurance to those who heretofore were unable to obtain it. The early attempts were conservative and very successful, and soon the service was extended from the slight risks to those more impaired.

In the mensuration of persons by groups, three main classes are formed—those whose collective mortality will probably produce an average better than a given standard; those who are expected to attain approximately a given standard; and those who may not be expected to attain that standard. While the clinician considers the individual in making his prognosis, the life insurance selector concentrates upon allotting the particular unit to the appropriate group. Although the attitude is different, the medical and surgical facts at the bottom of deductions made from one aspect or the other have a common basis. Having assessed a basic rating for height and weight we proceed to make numerical values for other characteristics; e. g., family history, personal history, physical condition, habits, environment, and occupation. Inoperative impairments also may be accurately assessed. Because of these methods of rating, the examiners are not asked to record their value of the risk, but they are asked to give such full and explicit report of the candidate that his assignment to a known group may be made without prejudice.

Dr. Charles C. Wolferth: The Life-Insurance Value of Graphic Heart Records.—Since no statistical data are available on this subject, it is necessary to speak purely from clinical observation. Cardiovascular types of disease (chronic glomerular nephritis, apoplexy, arteriosclerosis) are the most commonly ascribed causes of death among policyholders. Since death certificates are often inaccurate as to cause of death, and since patients dying, for example, of pneumonia, may have had underlying cardiovascular disease, much error in data occurs. Since the insurance companies must weed out those with significant cardiovascular impairment, they must overcome difficulties in two fields: (1) in those persons with actual impairments (high blood pressure, enlargement, insufficiency, arhythmia), for whom better methods of selection are necessary; (2) in those with cardiovascular disease, but who show no evidence of it on ordinary examination. Members of this latter group give incomplete histories, omitting a history of gonorrhea or syphilis or cardiac symptomatology, and in the early stage of myocardial degeneration, clinical detection is difficult. By the graphic method of study of heart disease, that is, with the electrocardiograph, chronic myocardial disease, in which the patient is as poor a risk as the diabetic, can

be detected. Such an examination, therefore, if demanded by the life-insurance companies, would not only help clinical medicine but would permit a better selection of risks.

In discussion, Dr. Max Goepp, who has long been connected with life insurance, commented upon the enormous numbers involved in producing averages, and upon the elimination of the personal equation in the examiner. He thought that the difference between an abnormality and an impairment should be considered, and believes that an electrocardiographic study will help to determine the doubtful case. This, however, remains to be learned from statistics.

Dr. Robt. S. McCombs, examining physician in the home office of the Provident, comes in contact with both individual and family doctor. He believes that there are problems which can be solved only by the alertness of the physician whose senses are trained by experience to detect impairments, and hence the personal equation must play a part. This also is a factor in the issuance of substandard insurance, when the word of an insurance expert on the prospect's insurability must be taken.

Dr. A. H. Davisson: Insurance examining detracts from practice, yet in insurance work, as in pathology or health work, there should not be a stigma attached. Insurance and the medical profession must be brought closer. The insurance examiner frequently must make repeated examinations of urine or blood pressure, without extra fee; nor does the fee vary, no matter what amount of insurance is taken. A closer union between medical examiner and medical director is desirable.

Dr. Old, in closing, said that when a patient is sent to the family physician because of sugar or albumin he should study the case more thoroughly than is often done. In doubtful cases an electrocardiogram is requested.

May 25, 1927

CLINICAL ALLERGY NIGHT

Dr. John A. Kolmer: The Nature, Mechanism, and Clinical Manifestations of Allergy.—The reason that some persons are made profoundly ill by a number of substances which are innocuous to the majority (substances not infectious, but frequently of the simplest kind of material, such as food) is that an idiosyncrasy, or allergy, or hypersensitiveness, or anaphylaxis is present. No subject is more mysterious or mystifying to the average practitioner. Until recently, "anaphylaxis" explained the regrettable sudden death after diphtheria antitoxin, but this is but one phase of allergy. All we know is that certain cells in these individuals are hypersensitive or have an altered reactivity to things which usually are harmless. The term "anaphylaxis" may be applied to those allergic diseases whose cause is known to be of a protein nature. Other conditions, when not protein, may be termed hypersensitiveness. We now recognize allergy as an important etiologic factor in hay fever, in many cases of bronchial asthma not of cardiac origin, in eczemas, and in urticarias. In hay fever there is hypersensitiveness to the pollens of certain plants; infinitesimal bits of material from a pillow, or rabbit's hair, orris root, silk, or effluvia from animals may precipitate bronchial asthma; eggs may produce a violent reaction. Broader than these better-known clinical groups is the claim of physical allergy—hypersensitiveness to changes in temperature. The term here, however, is probably misapplied.

Most of the known agents which produce allergy (pollens, effluvia, foods) have a protein nature, though it is possible that a glucosid may be converted by enzymic action into allergic material. There is an inheritable factor in allergy which is perplexing and hard to treat, forty per cent of the patients having this something transmitted from one or both parents. That the inheritable factor is an ability to produce the allergic antibody, or a special kind of tissue, would seem doubtful; there seems, rather, to be a peculiar instability of the vasomotor system, the individuals having a tendency to blushing and swelling, and congestion of mucous membranes. That this congestion of the nasal mucosa is due to the presence in the individual of an antibody for the protein of the exciting agent is proved by the fact that serum from an afflicted person, injected into a normal individual, passively transfers the hypersensitive state, and this hypersensitiveness lasts four weeks. We do not know why the antibody is present in some and not in others, but it has frequently been demonstrated.

While the skin tests do not warrant the confidence that has been placed in them, skin reactions are demonstrable in the majority of cases. The tissue which suffers principally is involuntary muscle, especially that of the blood vessels. Hence the predominant lesion is a paralysis of the vessels, with resulting congestion and edema (as urticaria, hay fever, vernal conjunctivitis, rhinitis, and bronchial asthma). For this reason, also, epinephrin, adrenalin chlorid, or ephedrin is used as a physiologic antidote. Diagnosis requires a carefully taken history, as well as skin testing. Then the individual must be removed, if possible, from contact with the thing responsible for the disease. If this cannot be done, the patient should be given preseasonal injection of the causal factor to exhaust the antibody from the cells, and thereby desensitize them.

Dr. C. A. Whitcomb (for Dr. Harry B. Wilmer): Diagnosis and Treatment of Hay Fever.—Active antigenic extract from causative pollens is now used in treatment. Hay fever is common in the United States and England, where plants rich in light, wind-borne pollens occur. Insect-pollinated plants are rarely causative except when smelled or used in interior decoration. Hay-fever seasons vary according to the flowering season of plants.

The preseasonal treatment depends on the history of the time of the attack, necessitating a knowledge of the pollinating periods. This treatment may be given by the short-interval method (injections made twice daily, with progressive dosage rapidly increased) or by the longer-interval method (carried out for two to three months before the attack, with injections every five days). All cases should be tested during the last two weeks of February, since at that time, when the main causative pollen does not predominate, other milder reactions may show up, thereby eliminating the ten per cent wherein there is incomplete desensitization. In a small number (less than one per cent) there is great sensitivity, and in these persons it is necessary to make the initial dose smaller and prolong the treatment. During the attack, treatment with the pollen extract is occasionally beneficial. Starting with a weak solution, injections are made every three or four days. This renders the symptoms milder and the attack shorter. Preseasonal treatment the ensuing year must be urged.

In the preseasonal treatment the ideal is to render the patient refractory to large doses just before time for the attack. Solutions of the following strengths are used—1:10,000; 1:5,000; 1:1,000; 1:500. A cutaneous test for dosage is made by the use of the above strengths on four scarifications. Two minims of the weakest solution giving a reaction is the initial dose.

This is increased two minims every five days until six minims of that dilution are given, when the same procedure is begun on the next strongest dilution, and so on until the 1:500 dilution is reached; then the dose is increased one minim each dose until the dose is twenty minims. Adrenalin chlorid should always be at hand in case of reaction, and the patient should remain in the doctor's office for at least twenty minutes.

Atypical cases occur: skin tests may be negative, yet a typical reaction is borne out by the history; cases may be positive to all the pollens applied, but a careful physical examination may show a constitutional disorder; typical hay-fever symptoms may occur, yet there may be no reaction to the usual pollens, which calls for a thorough investigation of the surroundings; pollen sensitivity may evidence itself only by an urticaria or erythema; a perennial type of hay fever may occur, precipitated by thermal agents, by chemicals, by protein, pollen, or house dust. It is necessary in these atypical cases to take a careful history, to make thorough tests, to have a nasal and laryngeal examination, and to culture the nose and sputum. Autogenous vaccines in ascending doses may be helpful. Three times daily these patients should receive two grains each of suprarenal, pituitary, and thyroid extract. A seasonal asthmatic attack should lead our suspicions toward its allergic nature.

The patient may be considered cured when free from symptoms and desensitized for three years. Of 545 cases, 183 had a 100-per-cent cure; 61 had 90 to 95 percent; 109, 70 to 90 per cent; 16, 25 per cent; and 26 had no relief.

Dr. Richard A. Kern: Bronchial Asthma.—Of the allergic diseases, asthma takes the heaviest toll in suffering and disability. It is a most complex diagnostic problem, and is difficult to treat. It calls for a most complete diagnosis and thorough treatment. In diagnosis, any hypersensitiveness must be ascertained, infection must be discovered, the endocrine factor, especially in women, must be recognized. Infection may be the sole basis, especially in cases developing late on a background of repeated winter colds, and infection complicates every case of chronic bronchial asthma. The outcome is determined by the amount of permanent structural damage.

No other clinical history is so difficult as that needed in bronchial asthma. There must be an accurate description of the beginnings of the trouble, what time of day, what relation to location, and the effect of change from place to place, any seasonal variation (and infection also may be seasonal), the relation of attacks to specific foods, considering here also intense aversions in children, animal substances to which the person is exposed, toilet preparations used, the coverings on the floors, any history of excessive sneezing, the effect of adrenalin, other types of allergy evidenced, such as urticaria, eczema, strawberry rash, drug idiosyncrasy, a history of allergy in the family. The patient should always be given a routine physical examination and complete skin tests (for multiple sensitization is the rule). There must be a clinical check on skin reactions, and a special examination of the nose and throat, with transillumination and x-ray.

Thorough treatment calls for an avoidance of the thing to which the patient is sensitive, or if this is impossible, desensitizing treatment should be carried out over a long period of time, together with correction of local nasal pathology (ethmoids, polyps, tonsils), autogenous vaccines from cultures made by the rhinologist, bronchoscopy for direct treatment, adrenalin or ephedrin early in the attack, possibly potassium iodid and lobelia, or benzyl-benzoate, which is valuable in occasional cases. Inhalants and asthmatic powders are mentioned only to be condemned. A personal survey of home conditions should be made. Asthma requires the coöperation of men in widely varied fields, and can be conquered only by team work.

Dr. Gordon J. Saxon: Manifestations and Diagnosis of Food Allergy.—Proteins are the substances concerned in a considerable proportion of the food-allergy reactions, and those similar chemically produce similar reactions. Cereals contain varied amounts of individual proteins, and because of the similarity of construction of all legumes, a person sensitive to one is usually sensitive to all. Sensitivity to food of widely varied sources is not constant in an individual, and there may be found a fluctuating eosinophilia and urticaria and a high degree of colonic stasis. Relief may be afforded by diminished carbohydrate intake, elimination of the colonic stasis, and removal of foci of infection. The hereditary factor must be considered. Cooking destroys the allergic substance in fruit but not in vegetables. Anesthesia negatives allergic responses.

Since there are recurring cycles of sensitivity, a repeated history is sufficient for diagnosis, and a patient may evidence several susceptibilities. In infants, during a gastro-intestinal disturbance, foods may sensitize because of entrance of abnormal substances into the blood, probably through the colon. Isolation of the proteins by electrolytic deposition may help, and the diet and sinuses must be attended to. Ptomaine poisoning must not be confused with allergy. The symptoms of food allergy are urticaria, eczema, asthma, vomiting and diarrhea, edema (especially of the feet and tongue in infants) and occasionally, râles in the chest. The treatment of food allergy is withdrawal of the food.

In discussion, Dr. J. Alex. Clark, Jr., stressed the economic importance of hay fever and asthma, computing from the average time lost by hay fever patients in Philadelphia a loss of $400,000 annually, and from asthma double that amount. It would seem, therefore, that ragweed, at least, being the most culpable plant and of no use, should be eradicated.

Dr. S. S. Leopold asked the proper classification of drug and physical allergy. He cited a case of violent reaction in a woman whose husband had eaten egg for breakfast, then kissed her. Ephedrin is comparable to adrenalin and is therapeutically active by mouth. Used in cases purely allergic, sixteen out of nineteen were relieved; in cases of predominant infection, only 38 per cent were relieved; but in the reflex-nasal group it was very good. Oral administration produces contraction of the nasal mucous membrane which lasts for six to eight hours.

Dr. Ralph H. Spangler believes there are allergic factors in other diseases of unknown etiology and indefinite pathology, such as migraine, "bilious attacks," cyclic vomiting, periodic diarrhea, and idiopathic epilepsy. In one hundred cases of epilepsy occurring in adults there was a history of allergic manifestations in ancestors in 88 per cent, as follows: asthma occurred in 44 ancestors, hay fever in 12, hives in 17, eczema in 8, migraine in 77, convulsions in 24. Of these, 117 were on the maternal side and 65 on the paternal. While the food skin tests are disappointing, there is immunologic evidence of allergy in epilepsy, and the food history is of decided value, with especial attention to the ketogenic diet. One patient with convulsions (an engineer) has been free from attack for three years, following the elimination of tobacco.

Dr. Kolmer, in closing, said that drug allergy may be

natural or acquired true hypersensitiveness, the drug probably uniting with the plasma proteins to form a new and inciting compound. This has not been proved. He cannot include physical allergy in this group by any stretch of the imagination, since the reaction to heat and cold is purely vasomotor. He believes that the antibody in different allergic states is essentially the same.

MARY A. HIPPLE, M.D., Reporter.

WARREN—MAY-JUNE

The May meeting was devoted to the discussion of a revised fee bill. A number of changes were voted upon and adopted.

Dr. Otis S. Brown gave a résumé of the treatment of liver diseases. A report of the Washington meeting of the A. M. A. was given.

The June meeting, held on the 20th, was addressed by Dr. Clayton C. Flatt on "Hemorrhoids." He stressed the definition, and preferred that one which described hemorrhoids as simple varicosities of the rectal veins. In the discussion which followed, Dr. Stewart reported a patient receiving great relief in an acute attack by inserting an icicle in the anus. Hot-water enemas were condemned as tending to aggravate the condition. Diet influenced the pruritus accompanying some cases, and should be studied. Constriction and cauterization are still the methods of choice for radical removal.

The directors of the Warren General Hospital invited the members to a supper, and announced that the medical staff, which consists of practically every physician in the county, would be recognized in the future by the election to the board of directors of two physicians designated by the staff. These physicians are to represent the staff and to have a vote in the affairs of the hospital. It is hoped that this arrangement will tend to produce greater harmony between the medical staff and the board of directors.

M. V. BALL, M.D., Reporter.

WASHINGTON—MAY

The new Washington General Hospital which has just been erected on a hill overlooking the county seat at a cost of $750,000 was first opened to patients on March 28, 1927. The formal opening was held on Hospital Day, May 12th, and was featured by a public inspection of the building and the graduation exercises of the school of nursing, at which the address was delivered by Dr. J. C. Doane, Medical Director of the Philadelphia General Hospital, and president-elect of the American Hospital Association.

The May meeting of the Washington County Medical Society was held the afternoon of the 13th at the hospital. After a business session, the meeting was turned over by President Donehoo to the staff members of the hospital, who conducted a clinic lasting two hours. The program was as follows: (1) Visceroptosis, by A. E. Thompson; (2) Vaginal Surgery, by J. C. Knox; (3) Conservative Treatment of Eclampsia, by F. A. Hare; (4) Pneumonia, by L. D. Sargent; (5) Tuberculosis of the Kidney, by D. H. Ruben; (6) The Relation of Infections of the Upper Respiratory Tract and Diseases of the Chest, by J. B. McMurray; (7) Case Report, by R. A. Knox; (8) Brain Tumor, Frontal Lobe, by J. F. Donehoo.

To this meeting and the banquet in the evening had been invited the members of the Greene County Medical Society and many physicians from Uniontown, Greensburg, Pittsburgh, and surrounding territory. Following the clinic, the members and guests were conducted through the new hospital, and they were unanimous in their praise of the location, architecture, and equipment. Every one was of the opinion that it represented the last word in hospital construction.

In the evening the staff of the hospital was host to about a hundred visitors from the surrounding districts at a banquet held in the George Washington Hotel. The speakers at this banquet were Dr. J. C. Doane; Dr. Porter Vincent, of the Mayo Clinic; Dr. William G. Turnbull, Deputy State Secretary of Health; and Mr. J. L. Stewart, President of the Board of Trustees of the hospital.

Dr. Doane made a splendid address of a general nature, and Dr. Vincent delivered a short but most pointed and interesting discussion of diseases of the lungs aside from tuberculosis, with special reference to their bronchoscopic study and treatment. Dr. Turnbull laid special emphasis on the value of the new hospital to the community, and expressed his delight at finding the State clinic housed in the hospital itself.

CLARENCE A. CRUMRINE, M.D., Reporter.

WESTMORELAND—MAY

The sixth annual clinic of the Society was held May 6th in Company I Armory at Greensburg. The clinicians were Dr. Henry Christian, Hersey professor of theory and practice of physic at Harvard Medical School, and Dr. J. Stewart Rodman, professor of surgery in the Woman's Medical College of Philadelphia. These teachers discussed four medical and four surgical cases to an interested gathering of several hundred physicians from Westmoreland and adjoining counties. Dr. A. C. Morgan, president-elect of the Medical Society of the State of Pennsylvania, was also present, and discussed some of the cases, and Dr. Henry John, of Cleveland, gave a short talk on diabetes.

The annual banquet was held in the evening at the Greensburg Country Club. Dr. J. J. Singer was toastmaster, and Drs. Morgan, Christian, and Rodman were again the speakers.

C. C. BALDWIN, M.D., Reporter.

YORK—JUNE

The June meeting was held on the 2d in the Professional Building, with President E. S. Stambaugh in the chair.

Dr. H. W. Kohler, Red Lion, Pa.: Sigmoiditis and Colitis.—The colon is not only important for residue but also for assimilation. There are two sources of infection—exogenous and endogenous. Chronic colitis may be divided into two types: (1) acid, in which the mucosa is red, swollen, and filled with flakes of detached mucus, and (2) alkaline, in which there is a marked degree of inflammation without much mucus or flaking.

Colitis may be a focus of infection for many severe diseases, particularly around the rectum. The physical signs of colitis aid greatly in the diagnosis, especially the characteristic feel to the touch upon "rolling the colon" and the resulting tenderness. An oblique line of dullness is generally present which disappears in the knee-chest position, and the tonicity and strength of the abdominal muscles is altered.

MILTON H. COHEN, M.D., *Reporter.*

The Woman's Auxiliary of the Medical Society of the State of Pennsylvania

MRS. SAMUEL BOLTON, *Editor*
4701 Leiper Street, Philadelphia, Pa.

COUNTY AUXILIARY REPORTS

ALLEGHENY

At the last Auxiliary meeting of the season Dr. Charles H. Henninger talked on the subject "Why Worry?—Hypersensitiveness and the Attainment of Nervous and Mental Poise." Causes and effects of worry were discussed, and as a solution Dr. Henninger offered this thought: "The definite effort to banish a given worry from the mind merely emphasizes that particular topic and aggravates the condition. If we wish to keep from worrying we should occupy our minds with some task unrelated to the cause." The doctor suggested ways to increase the life span by decreasing the strain on that most important part of the human body—the nervous system and the mind.

The Woman's Auxiliary feels that through the confidence placed in it by the members of the Allegheny County Medical Society, and through the willingness of its members to give their time and knowledge for our enlightenment, we have gained much which is invaluable to us and by means of which we can become truly helpful to the Medical Society of which we are the Auxiliary.

MRS. DAVID B. LUDWIG,
Chairman Press Committee.

BEAVER—JULY

The regular quarterly meeting of the Beaver County Auxiliary was held at the Ambridge Country Club, Friday, June 3d. After luncheon the meeting was called to order and the chairmen gave reports. Additional names to our membership and a splendid report from our bridge party were the outstanding features. Those in attendance at the Washington meetings reported them very interesting and instructive, After voting in favor of a yearly physical examination for each doctor's wife on her birthday, Mrs. Story gave a most interesting talk, entitled "Every Child Should be Happy."

MRS. NORMAN R. CRUMRINE, Reporter.

PHILADELPHIA

The regular meeting of the Woman's Auxiliary of the Philadelphia County Medical Society was held at the home of the Society, 21st and Spruce Streets, Philadelphia, Wednesday, May 25, 1927, at 3 p. m.

Mrs. George Morley Marshall presided, and introduced Dr. Horatio C. Wood, Jr., who talked on "Patent Medicines," giving the audience an insight into the various frauds practiced by patent-medicine companies and showing how susceptible the public is to the wiles of these concerns.

Following this address the chairmen of the various standing committees made their respective reports.

The Auxiliary has two definite objects for which to work this year. One is to secure subscriptions to *Hygeia*, and the other to give assistance to the Aid Association of the Philadelphia County Medical Society.

Mrs. John M. Fisher, chairman of the committee to support the work of the Aid Association for the relief of disabled doctors, after giving a comprehensive outline of the object and functions of the organization, stated: "This committee was formed for the special purpose of raising contributions for the Aid Association Fund through entertainments and by personal solicitation, the accumulated sum to be designated the 'Memorial Fund of the Woman's Auxiliary of The Philadelphia County Medical Society.'" Ways and means for the work were discussed, and reference was made to the initial contribution to start the fund by the recently elected president, Mrs. George Morley Marshall. The chairman stated that arrangements had been perfected for a morning's entertainment in the form of a card party for members of the Auxiliary and their friends, to be given at the Theater of Belmont Mansion at eleven o'clock on Tuesday, June 21st. Through one of the members of the committee the use of the theater for this purpose has been secured without charge.

Refreshments were served at the conclusion of the business, Mrs. Loving in charge.

MRS. GEORGE A. KNOWLES.

WESTMORELAND

The Woman's Auxiliary of the Westmoreland County Medical Society met Tuesday evening, June 7th, at the home of Dr. and Mrs. J. S. Silvis, of Harrison City. Mrs. W. J. Walker and Mrs. H. B. Barclay, of Greensburg, were joint hostesses with Mrs. Silvis.

Mrs. Walker, who is one of the officers of the State Auxiliary, gave some interesting sidelights on the recent executive meeting in Harrisburg which she attended. Mrs. Barclay gave a brief report on the May meeting of the Allegheny County Auxiliary held at the William Penn Hotel, Pittsburgh.

A motion was passed to make every member of the club responsible for securing three subscriptions to *Hygeia* by October 1st.

The Auxiliary will not convene during July and August, but on September 6th will be luncheon guests of Mrs. Ambrose.

Following the business session, six tables of bridge were in play. Prizes were won by Mrs. C. D. Ambrose, of Ligonier; Mrs. L. F. Wilson, of Greensburg, and Mrs. R. L. Wilson, of Jeannette. Refreshments were served by the hostesses.

MRS. P. G. MCKELVEY.

Rectal Examination in Labor as a Diagnostic Procedure and Aseptic Precaution.—The advantages of rectal examination are as follows: It is a great time-saver. A clean glove can be slipped on and lubricated while the patient is being draped; the dangers of infecting the patient are greatly reduced where precaution is used to insert the examining finger under direct vision and not allowing a careless thumb or finger to enter the vulval lips. One might be led to believe the rectal examination would injure the rectal mucosa, causing an infection to pass through the cellular tissue, but Ralph A. Reis, writing in the *American Journal of Obstetrics and Gynecology*, quotes Fuerst as having done rectal examinations on 18,000 patients, with no injury to the rectal mucosa, this being proven by the proctoscope in a large number of these patients, and by controls. A united effort should be made to lower morbidity and mortality rates, by using the rectal examination in the progress of labor, and thereby reduce the percentage of deaths and invalidism in child-bearing women.—W. A. DEAN, *Oklahoma State Medical Journal.*

THE

MEDICAL SOCIETY OF DELAWARE

AN OUTLINE OF CARDIOLOGY*

OLIN S. ALLEN, M.D.
WILMINGTON, DEL.

Heart work dates back as far as the fifteenth century when, in 1538, Ballion, a Frenchman, first described enlargement of the heart in a cadaver, and at about the same time attempted to formulate the signs and symptoms of an aneurysm, apparently without success. In 1758 Harvey did his immortal work by describing the circulation of the blood. In 1781 Laënnec developed the method of auscultation which greatly enlarged the field of cardiac diagnosis. Four years later, an English physician by the name of Withering discovered the marvelous effect of digitalis in treating the symptoms caused by heart trouble, and so became one of the greatest benefactors of humanity in his day.

Corvisart, understanding the necessity for new methods of examination of the heart, in 1755 perfected the art of percussion. At this time, about all that was known of cardiac pathology was aneurysm and enlargement of the heart, and this new percussion method enabled the physician to outline accurately the contour of the heart and thus to reveal in the living patient conditions which heretofore had been demonstrated only at autopsy. This physician seems to have developed his skill in the art of percussion to such an extent that he astounded his auditors by the accuracy of his diagnosis. He undertook to recognize induration of the lungs, pleural effusion, hydrops of the pericardium, and aneurysm of the heart.

In 1863 Marey succeeded in recording the pulse wave by means of a sphygmograph. This was in use successfully for several years, but in the last few years has been largely, if not almost entirely, replaced by the galvanometer or electrocardiograph which was perfected by Einthoven, of Holland, in 1901, and was used in Europe for many years before being brought here around 1910 or '11.

All these forms of instruments are a material aid in diagnosing heart conditions, but mechanical instruments or laboratory findings should never be depended upon entirely. Only with a complete history of the case, and the laboratory and clinical findings clearly defined, is it possible to arrive at a proper understanding of the patient's condition.

In heart examinations, if the etiologic factors are kept in mind, it often aids in making an accurate diagnosis. These factors are: (1) hypertension, (2) arteriosclerosis, (3) coronary occlusion and angina, (4) rheumatic fever, (5) hyperthyroidism, (6) lues.

There are six main factors to consider in the examination of every case. All of these are very important, and each is considered separately below.

HISTORY. The history is most important in heart work, and it is difficult to secure a clear account in many cases. Therefore, this matter should not be entrusted to the technician. A careful survey should be made of the childhood diseases, especially pneumonia, scarlet fever, diphtheria, and the like, as well as repeated attacks of acute follicular tonsillitis. The rheumatic triad should be looked into very carefully, for this forms the basis of many severe forms of cardiac disease in later life. This is especially true of auricular fibrillation and auricular flutter. A careful survey of the patient's history often furnishes a clue to the nature of the ailment before the examination actually begins.

CARDIO-CLINICAL EXAMINATION. The transverse diameter of the heart is outlined by percussion as accurately as possible to reveal the right and left cardiac borders. This is important, because some authorities believe hypertrophy cannot be present without disease. In outlining the transverse diameter, I follow the scratch percussion method, which I believe to be one of the most accurate methods we have, at the present time, to determine the extent of cardiac enlargement. By auscultation the different murmurs may often be differentiated.

CARDIAC RESPONSE TO EFFORT. Some authorities claim that this test is of very little value. I personally am not convinced at the present time entirely of its merits, but I do believe that when

* Read before the Sussex County Medical Society, Delaware, November, 1926.

followed carefully and conscientiously it will often help in estimating the cardiac capacity. This, I believe, does not depend so much on the increase in cardiac cycles after exercise as it does on the time that elapses between the end of exercise and the return of the heart to its normal rate.

Blood-Pressure Readings. Diastolic readings, especially, are most important in arriving at a proper diagnosis of any heart condition, for it is in patients with a high diastolic pressure that some kind of cardiac disorder is most likely to be found. Also, the diastolic pressure often helps in arriving at a diagnosis of aortic-valve involvement, which otherwise might be doubtful from a clinical standpoint. This diagnosis, however, should not be made because of a diastolic pressure of only 30 or 40 without the proper clinical findings, because a low diastolic pressure may be present in hyperthyroidism with no organic disease of the aortic valve.

Electrocardiography. This undoubtedly is the most accurate method available at the present time of measuring heart-muscle strength. It gives positive evidence of any irregularity, aids in the interpretation of arhythmias, and in differentiation between arhythmias such as premature contractions, branch bundle block, auriculoventricular heart block, auricular fibrillation, and auricular flutter. It will often enable the diagnosis to be made of myocardial fibrosis which cannot be determined clinically. It is also valuable in separating the serious from the unimportant heart conditions, and in formulating the line of treatment—such as indications for or against digitalis and allied drugs.

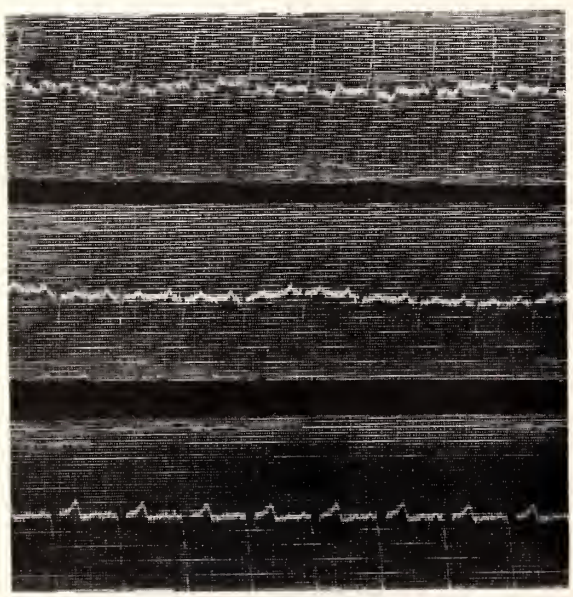


Fig. 1. Illustrating a right-branch bundle block.

X-Ray and Fluoroscope. The six-foot x-ray plate may be taken as a check on the percussion outline, or in patients with thick chest walls or pendulous breasts. The fluoroscope is used largely for the detection of aneurysm.

Upon completion of a heart examination, the main factor to determine is whether there is organic disease of the heart or a secondary affection resulting from some focus of infection in a remote part of the body, such as abscessed teeth, kidney disease, etc.

Another important consideration is the determination of the heart capacity. Assuming that all normal hearts are able to do 100 per cent of work, then a diseased heart may be able to do only 40 to 60 per cent of work. It is logical to suppose that a patient will live much longer if he lives within his heart capacity than if he attempts to do the work allowed by a normal heart. The physician, therefore, should first work out the heart capacity, and then try to induce the patient to live within this limit.

The absence of heart murmurs, irregularity of pulse or increased ventricular rate is not an assurance that the patient has a normal heart, for it is in individuals without adventitious sounds, and with a full, regular, and bounding pulse that the most serious myocardial fibrosis and heart blocks occur. This is illustrated by the two cases following: Both patients were women whom I had attended for several years. Both ran a moderately high blood pressure, especially diastolic, and both complained of some epigastric distress which I attributed to the hypertension. At no time did I detect a murmur or any form of arhythmia in either case. In both cases the pulse and heart were always regular and of good volume. Much to my surprise (see figures 1 and 2), electrocardiograms revealed a decided prolonged Q-R-S complex, and inverted T waves in lead one—which, when interpreted, means that both patients had a right-branch bundle block and a severe grade of myocardial fibrosis.

On the other hand, murmurs and irregularities do not necessarily mean that a serious heart affection is present. In any number of cases the findings are only functional in character. Again, the irregularity may be only premature contractions, and these do not mean much unless associated with some other disease. By way of illustration: A patient, referred by another physician, presented himself for examination. On clinical inspection I found an irregularity so marked as to indicate fibrillation. As this arhythmia was aggravated by exercise, I was convinced that the diagnosis was correct. An

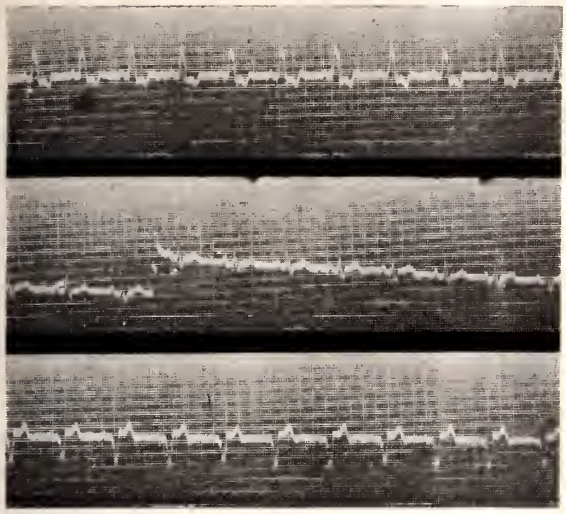


Fig. 2. Illustrating a right-branch bundle block.

electrocardiogram showed multiple ventricular premature contractions, probably caused by abscessed teeth. At any rate, the irregularity cleared up upon removal of the teeth.

The physician should be careful not to diagnose cardiac disease unless it exists, for the differentiation between organic and secondary cardiac conditions means much in formulating the proper line of treatment, and determines the future welfare of the patient.

2230 Market Street.

EDITORIAL

FACTS AND FANCIES IN PHYSICAL THERAPY

A visit to the Commercial Exhibit at the convention of the American Medical Association, in Washington, D. C., impressed one with its magnitude, and the extravagant recklessness in the expenditure of money on the various electrotherapeutic devices. There appeared to be no limit to the number of costly designs, each manufacturer endeavoring to excel in the mechanical perfection of his product, regardless of cost. The claims made for the therapeutic virtues of these mechanical agents are equally extravagant, and in some instances preposterous. It would appear that there is not an ill to which human flesh is heir that will not yield to one or the other of the electric machines.

One recalls, with a sense of cynical humor, the time when the vibrator was the great panacea. Every doctor was urged to obtain a vibrator and cure all of his obstinate chronic patients, and almost every doctor did purchase one and vibrated right and left. Then the barbers took it up, and this comparatively harmless and inexpensive device for curing everything became *déclassé*. The static machine got into the limelight as a cure-all, and again the doctors were urged to purchase these lumbering cabinets, with the revolving glass plates and mysterious lightninglike sparks. Books and treatises had been written about these wonder workers; hardly an affection that could withstand the bombardment of the various modalities. Then the quacks saw the commercial possibilities of these elaborate and mysterious-looking cabinets, and the static lost its attraction, and was cast into the junk pile of discarded panaceas. The faradic and galvanic batteries had been in vogue about the same time, with equally extravagant claims, and greater popularity, owing to comparatively low cost. But this very advantage led to self-medication by the laity, and the junk pile eventually claimed them also. The high-frequency machines then blazed into glory. Just about that time hypertension became a rather popular subject for discussion among doctors as well as laymen, and it was discovered by the manufacturers that the high-frequency current "cured" this new malady in a few sittings. Again, the doctors were urged to avail themselves of this new miracle, and they did.

We do not hear so much about the cure of "high blood pressure" these days. But then, "diathermy" is the thing. Fortunately, the high-frequency machine also furnishes this particular modality, and all is not lost. However, the very latest is the ultraviolet light, and "no progressive physician should be without it." When first introduced by Finsen, the claims were comparatively modest—it cured lupus, and was beneficial in a number of skin affections. The manufacturers of the modern apparatus threw caution to the winds, and advanced claims even more extravagant than have been made for the other electrotherapeutic devices.

The entire question of the physiologic effect of sunlight is still *sub judice*. Despite the universal belief that light is essential to life, we find that the human organism adapts itself quite readily to darkness, as is shown by the fact that the inhabitants of the extreme north and the dwellers in our modern subways and office buildings, not to mention miners, are apparently not injured by living in darkness. Surely the primitive cave man, with his huge physique, a powerful arm wielding an enormous club, in constant pursuit of a fleeting female, does not appear to have suffered much from lack of radiant energy.

In a recent study of the effect of light of various wave lengths on the growth of plants, H. W.

Popp, of the Boyce Thompson Institute for Plant Research, found that "removal of only ultraviolet rays had little effect on the general growth and appearance of the plants as compared with those receiving these rays. . . . These results also indicate that ultraviolet rays are not indispensable for good, vigorous growth." Yet, a number of institutions and private homes are installing windows with quartz glass at a cost of two-fifty to five dollars per square foot, for the supposed beneficial effect of the ultraviolet rays of the sun on health. There is no direct evidence to prove it, only the say-so of the manufacturers of the glass and the makers of quartz lamps. What effect light, particularly the ultraviolet waves, has on abnormal states of the organism remains to be shown by a large number of controlled clinical observations. The results obtained so far are interesting, but by no means conclusive.

The fact of the matter is that any agent, whether chemical or mechanical, that may influence metabolism, either by acting on the circulation or on cell protoplasm, is likely to prove beneficial in chronic diseases; but in many cases these benefits are not commensurate with the elaborateness of the special technic, and may be achieved in a much simpler way, without recourse to costly apparatus. A few simple exercises out of doors, or a proper dietetic regimen will in most cases accomplish as much as may be obtained from expensive apparatus.

There undoubtedly are conditions in which physiotherapy is indicated, and it is these comparatively few cases that place the responsibility on the physician to be honest with himself, with his patients, and above all, with medical science.

Medical News

Deaths

J. Clarence Caldwell, M.D., of Butler; University of Pittsburgh School of Medicine, 1895; aged 60; June 7.

Edward Kerr, M.D., of East Downingtown; University of Pennsylvania School of Medicine, 1890; aged 58; May 31.

Joseph Herbert Robison, M.D., Bradford; University of Buffalo (N. Y.) School of Medicine, 1895; aged 55; May 16, of carcinoma of the throat.

Walter S. Blaisdell, M.D., of Punxsutawney; College of Physicians and Surgeons, Baltimore, Md., 1890; aged 60; April 28, of heart disease.

Walter S. Wilson, M.D., of Lewistown; College of Physicians and Surgeons, Baltimore, Md., 1879; Pennsylvania Railroad surgeon for sixteen years; on the staff of the Lewistown Hospital; aged 72; June 5, from a complication of diseases.

Frank Fisher Moore, M.D., Homer City, Pa., Medico-Chirurgical College, 1903, aged 47, was shot and killed June 24, by an unidentified patient whom he was taking to the Indiana Hospital and who immediately committed suicide. No reason for the shooting is known.

Edwin Forrest Kamerly, Jr., M.D., University of Pennsylvania, 1891, at the Samaritan Hospital, Philadelphia, June 21, after an illness of several months. Since 1917 he was ophthalmologist to the Frankford Hospital, Philadelphia. He is survived by his parents, Dr. and Mrs. E. F. Kamerly.

Dr. Abraham Zingher, well-known bacteriologist of New York City, died June 5, a martyr to science. He was asphyxiated in the laboratory of the Willard Parker Hospital when a gas burner became disconnected while he slept in a chair after work. Dr. Zingher, in addition to his private practice, was a lecturer. He was clinical professor of pediatrics at the New York Polyclinic and assistant professor of bacteriology at New York University and Bellevue Hospital Medical College.

Births

To Dr. and Mrs. William Hewson, of Overbrook, a son, on June 14.

To Dr. and Mrs. Hugh P. Shellabear, of Reading, a son, recently.

To Dr. and Mrs. P. J. McDonnell, of Scranton, a daughter, recently.

To Dr. and Mrs. C. H. Schultz, of Johnstown, a daughter, Margaret, May 16.

To Dr. and Mrs. David S. Bantley, of Johnstown, a son, David Scott, Jr., recently.

To Dr. and Mrs. John C. Hirst, 2d, of Philadelphia, a daughter, Elizabeth du Puy Graham Hirst, June 11.

To Dr. and Mrs. Walter Blair Stewart, of Atlantic City, N. J., a daughter, June 14.

Engagements

Miss Hazel M. Brink, of Trenton, N. J., and Mr. Charles Lovett, son of Dr. and Mrs. Henry Lovett, of Langhorne.

Miss Janet McClure Hardie, of Wilmington, Del., and Dr. Huston St. Clair, a resident physician at the Pennsylvania Hospital, Philadelphia.

Miss Mary E. Meredith, daughter of Dr. and Mrs. Hugh B. Meredith, of Philadelphia, to Mr. Hobart A. Hawley, son of Mrs. Robert Hawley, of Philadelphia.

Marriages

Miss Eleanor Speiser to Dr. Louis Cohen, of Philadelphia, June 1.

Miss Florence Ashcom to Dr. Edward Pardoe, of Johnstown, May 16, at Philadelphia.

Miss Mary Elizabeth Davis, of Hyde Park, to Dr. W. D. Whitehead, of Scranton, June 2.

Miss Emilie M. Bastian, of Allentown, to Dr. Claude B. Lerch of Pottstown, June 1.

Miss Elizabeth Nicholson, of Green Ridge, to Dr. H. Carl Dimlich, of Scranton, June 18.

Miss Harriet Louise Kipp, of Allentown, to Dr. Clairmont Arthur Kressley, of Sellersville, June 23.

Miss Sarah Wittenberg Hirsh, daughter of Dr. and Mrs. Charles S. Hirsch, Philadelphia, to Mr. Harold B. Frank, recently.

Miss Alyse Plank, of Collingdale, to Dr. Charles William Mayo, son of Dr. and Mrs. Charles Horace Mayo, of Rochester, Minn., June 25.

Miss Louise M. Stout, daughter of Dr. and Mrs. Oliver Stout, of Philadelphia, to Mr. Frank Carl Podboy, of Forest City, Pa., June 11.

MISS MARGARET PACKARD, daughter of Dr. and Mrs. Francis R. Packard, of Media, to Mr. John H. W. Rhein, son of Mrs. John H. W. Rhein and the late Dr. Rhein, of Philadelphia, June 23.

MISS ELIZABETH BUCKE, of Harrisburg, to Dr. Edgar Raymond, a resident physician at the University of Maryland Hospital, June 16. Mrs. Raymond was graduated from the Woman's Medical College of Pennsylvania a week prior to her marriage, and will be resident physician at the Lancaster Hospital for a year. Next year Dr. and Mrs. Raymond will leave for India as medical missionaries.

Miscellaneous

DR. HARRY J. DONALDSON, of Williamsport, is recovering from a severe attack of pneumonia.

DR. AND MRS. O. G. A. BARKER, of Johnstown, have returned from a three months' tour of Europe.

DR. MARY ELIZABETH HELLER, of Williamsport, is convalescing from a severe attack of rheumatic fever.

DRS. REMO FABBRI AND JOHN T. MACDONALD of Norristown, sailed for Italy and France, respectively, in June.

DR. CHARLES B. NOECKER, of Scranton, has sailed for Europe to attend the Post-Graduate Assembly Clinics.

THE PHILADELPHIA COMMITTEE of the American Society for the Control of Cancer waged a campaign in May to raise $100,000.

THE WOMAN'S MEDICAL COLLEGE OF PHILADELPHIA graduated fourteen, on June 9. The address was delivered by Dr. Williard C. Rappleye.

DR. AND MRS. WILLIAMS BIDDLE CADWALADER, of Villanova, sailed on June 11 for Europe where they will travel until next October.

DR. HERBERT M. GODDARD, of Philadelphia, is president of the recently organized Physicians Square Club of Philadelphia.

DR. ETHAN FLAGG BUTLER, of Sayre, has been elected secretary-treasurer of the American Association for Thoracic Surgery for 1927.

FRANK E. BROOKE, superintendent of the Harrisburg Hospital since 1921, has announced his resignation, to be effective August 1.

DR. JESSE L. LENKER AND FAMILY, of Harrisburg, have gone to Europe for several months, part of which time Dr. Lenker will spend in study.

DR. EMLYN JONES, of Johnstown, has been appointed in charge of the Bureau of Vital Statistics of the Pennsylvania State Health Department.

DR. JAMES M. ANDERS, of Philadelphia, received the degree of Doctor of Science at the commencement exercises of Ursinus College, June 6.

AT THE COMMENCEMENT of the University of Pennsylvania, held June 15, there were 132 graduates from the School of Medicine.

DR. HERBERT B. CARPENTER and Miss Anna C. Carpenter, of Philadelphia left June 23 for Honolulu. They expect to return early in September.

DR. D. W. SHELLY, of Ambler, sailed on June 25, to be gone seven weeks in the interest of the International Rotary which convenes at Ostend, Belgium.

THE AMERICAN ASSOCIATION of Genito-urinary Surgeons elected Dr. Henry G. Bugbee, of New York City, president at its recent annual meeting.

FIFTY-EIGHT STUDENTS of Hahnemann Medical College and Hospital received diplomas, June 4, at the seventy-ninth annual commencement exercises.

DR. MAXWELL CHERNER, a police surgeon of Philadelphia, who was subpœnaed to appear in court recently, was fined $30.85 because he arrived two hours late.

DR. FRANK M. GINLEY, of Dunmore, who became ill while attending the Washington session of the A. M. A., and was confined to a hospital there, has recovered.

DR. JOHN S. LUNDY, of the Mayo Clinic, addressed the annual meeting of the McKeesport Academy of Medicine at the Youghiogheny Country Club, June 13, on "Regional Anesthesia."

DR. VALENTINE R. MANNING, of Philadelphia, was guest of honor at a testimonial dinner in the Elk's Club the night of June 15, given by more than 400 of his friends.

THE HONORARY DEGREE of Doctor of Science was conferred on Dr. George E. de Schweinitz, of Philadelphia, at the annual commencement of Harvard University, June 27.

DR. AND MRS. BURTON CHANCE, Miss Helen Scott Chance, Miss Maria Lewis Chance, and Mr. Burton Chance, Jr., sailed June 25 on the *Majestic* to spend the summer in England.

AT A MEETING, May 11, the trustees of the Altoona and Mercy Hospitals, Altoona, arranged for a joint campaign to raise $250,000 to meet the financial needs of the next two years.

FOLLOWING THE ACTION of seven citizens who pledged contributions amounting to $95,000, the citizens of Kane have started a campaign for a new community-owned and operated hospital.

THE PHILADELPHIA COUNTY MEDICAL SOCIETY has announced plans for an Honor Room and a memorial tablet in the County Medical Building to honor the physicians killed in the World War.

DR. AND MRS. JOSEPH M. ASHER and daughter, Maynir, of Philadelphia, sailed July 9 for England and will spend several weeks on the continent, returning home early in September.

AT THE 105TH ANNUAL COMMENCEMENT of the Philadelphia College of Pharmacy and Science, held June 9, there were forty-nine graduates. The address was delivered by Dr. Edgar Fahs Smith.

AT A MEETING of the executive committee of the Allegheny County Public Health Association held in Pittsburgh, Dr. A. W. Colcord of the Carnegie Steel Company was elected president.

AT A RECENT MEETING of the Philadelphia County Medical Society, Dr. Orlando H. Petty was nominated without opposition to the office of president-elect. His election will automatically follow in November.

DR. AND MRS. G. ORAM RING, Philadelphia, will sail July 9 on the *France* for Europe, where they plan to spend six weeks motoring through France, Czecho-Slovakia, and Italy, returning in September.

DR. AUSTIN MALLARD GROVE, of York, was taken suddenly ill while returning from Atlantic City recently. He was taken to the Cooper Hospital, Camden, where he was found to be in a critical condition from acute uremia.

AT ITS ANNUAL COMMENCEMENT, June 16, nine student nurses were graduated from the Christian H. Buhl Hospital Training School for Nurses at Sharon. Mrs. E. S. H. McCauley, Secretary of Welfare of the State Department of Health, delivered the address.

THE SECOND ANNUAL CONFERENCE of the Water Works and Sewage Treatment Works in Pennsylvania will be held July 12 to 15, under the direction of the Department of Engineering of State College coöperating with the Bureau of Engineering of the State Health Department.

SIXTY-FIVE PHYSICIANS from York and York County assembled in the ball room of the Yorktowne Hotel the evening of May 12 at a testimonial dinner in honor of Dr. A. A. Long and to observe the golden anniversary of the beginning of his medical practice in York.

A LARGELY ATTENDED RECEPTION to Dr. Wilmer Krusen, the recently elected president of the Philadelphia College of Pharmacy and Science, was given the evening of May 27 in the Clover Room of the Bellevue-Stratford Hotel by the Board of Trustees of the College.

A NEW WING of the Warne Hospital at Pottsville was opened to the public on June 14. Dr. Hobart A. Hare, of Philadelphia, delivered an address, and a largely attended reception to the Schuylkill County Medical Society was one of the features of the occasion.

ON JUNE 1, four bandits held up a paymaster of the department of health, at the entrance to the Philadelphia Hospital for Contagious Diseases, and two hospital payrolls totaling $13,000 were stolen from him. One payroll was for the Hospital for Mental Diseases at Byberry.

THE CORNERSTONE OF THE maternity annex of the Jewish Hospital, Philadelphia, was laid June 1 by the R. W. Grand Lodge of Pennsylvania, F. and A. M. The address was delivered by Mayor Kendrick. The opening of the new building will provide one hundred additional beds.

THE MEDICAL SOCIETY OF THE STATE OF NEW YORK elected the following officers at its recent annual meeting at Niagara Falls: president, Dr. James E. Sadlier, Poughkeepsie; president-elect, Dr. Harry R. Trick, Buffalo; secretary, Dr. Daniel S. Dougherty, New York City.

THE FIRST INTERNATIONAL CONGRESS ON MENTAL HYGENE, aimed at a world-wide campaign for the prevention of nervous and mental disorders, will be held in Washington in April, 1929, according to a decision reached in Paris, June 3, by representatives of thirteen nations.

DR. GEORGE H. CROSS, of Chester, attended the meeting of the American Ophthalmological Society at Quebec, June 27-29, where he read a paper on "Removal of a Number-Six Lead Shot from Within the Eyeball by Specially Devised Forceps With the Aid of the Double-Plane Fluoroscope."

THE UNITED STATES CIVIL SERVICE COMMISSION announces an open competitive examination for the following positions: Assistant Medical Officer, Associate Medical Officer, Medical Officer, and Senior Medical Officer. Applications will be rated as received at Washington, D. C., until December 30.

A GROUP OF MEDICAL MEN in Philadelphia have filed a petition for a charter for the Laboratory of Research Chemotherapy to advance preventive medicine. The purpose is to bring about a closer relationship between those who are working in chemistry, in therapeutics, and in preventive medicine.

DR. ROSS HALL SKILLERN has returned from Spokane where he was the guest of the Pacific Coast Oto-Ophthalmological Society at their meeting on June 6-7. While there he delivered, by invitation, an address on the "Ethmoidal Problem," and was afterwards made an honorary member of the Society.

THE LEMOS B. WARNE HOSPITAL has been offered to the city of Pottsville, together with an endowment of $500,000. It is doubtful if the city can legally accept the gift, as it can neither levy a tax to support a hospital, nor acquire a hospital unless it is self-supporting, nor contribute to its support.

THE DAILY PRESS STATES that a physician who asserts he is the "official representative of the National Electric Institute of Philadelphia," is in Germany, selling doctors titles for $500. The degrees are issued to applicants on the strength of their "practical knowledge," after all payments are made.

TWENTY-FIVE NURSES were graduated from the Graduate School of Nursing of the University of Pennsylvania on May 25. Nine prizes were awarded. The address was delivered by Major Julia C. Stimson, superintendent of the Army Nurse Corps, and the only woman in the country to hold the rank of major in the Army.

TWO MEMORIAL TABLETS bearing the names of life members of the Philadelphia County Medical Society were unveiled recently at the Society's home. Dr. James M. Anders conducted the ceremonies, and following a brief address six scientific papers were read by representatives from each of the Society's six branches.

A GIFT OF $57,000 comprising the assets of the abandoned Roosevelt Hospital, Philadelphia, has been given to Temple University, and will be devoted to expansion of Samaritan Hospital a department of the Temple School of Medicine. The money will enable the hospital to complete the fourth floor, which will increase the bed capacity to about 300 beds.

THE ANNUAL BANQUET of the Medical Alumni Association of Temple University was held on the evening of June 15 following an extensive Alumni Clinical Day Observance. Dr. J. Howard Frick was elected president, and a silver loving cup was awarded to Dr. Matthew Ersner for his outstanding Alumni activities during the past year.

THE FIFTY-SIXTH ANNUAL MEETING of the American Public Health Association will be held in Cincinnati, October 17-21, with headquarters at the Hotel Gibson. The regular conference of the Ohio Public Health Officers, the Public Health Nurses, and the Ohio Society of Sanitarians will be held in conjunction with the annual meeting of the Association.

A CONFERENCE of health authorities and organizations to plan for a state-wide campaign against diphtheria was called by Governor Moore, of New Jersey, to meet in the State House in Trenton on June 29. It has been announced that a crusade will be launched at the beginning of the next school year in September, and an effort will be made to lower the present death rate of 9.4 per hundred thousand population.

AT THE ANNUAL COMMENCEMENT OF TEMPLE UNIVERSITY, Philadelphia, held June 16, the degree of M.D. was conferred upon fifty graduates from the school of Medicine. The honorary degree of Doctor of Science was conferred on Dr. Wilmer Krusen, emeritus professor of gynecology; president of the Philadelphia College of Pharmacy and Science, and Director of Public Health of Philadelphia.

THE FOLLOWING HAVE been elected officers of the Association of American Physicians for the coming year: president, Dr. A. S. Warthin, University of Michigan; vice-president, Dr. C. P. Howard, McGill University; secretary, Dr. J. H. Means, Boston; recorder, Dr. I. T. R. Baggs, Johns Hopkins University; treasurer, Dr. L. G. Beuner, Yale University; councilor, Dr. J. A. Katts, University of Chicago.

GENERAL LINCOLN C. ANDREWS, who will be succeeded as Assistant Secretary of the Treasury in charge of prohibition enforcement on August 1 by Seymour Lowman, former Lieutenant Governor of New York, will go abroad in August as the representative of the Government in an endeavor to perfect agreements with Great Britain and other countries for the prevention of the smuggling of narcotics into the United States.

IN THE SCHOOL OF MEDICINE of Johns Hopkins University, a new curriculum will go into effect in part next term and in full the following year. It has been rearranged on the basis of four quarters of eight weeks each for the academic year. The required work will be confined to minimal courses of instruction in each of

the major departments, leaving practically half of the student's time for courses of his own election. All term examinations as at present given will be discontinued next fall and group examinations will be substituted.

THE CORNERSTONE OF THE NEW BUILDINGS of the Philadelphia College of Pharmacy and Science, 43d street and Kingsessing avenue, Philadelphia, was laid June 7. The college is the oldest pharmaceutical school in the United States, having been established in 1821. It is expected that new buildings will be completed for the January term. Dr. Wilmer Krusen, president of the college, presided. The principal address was made by Alba B. Johnson, president of Jefferson Medical College.

THE CARDIAC COMMISSION of the Allegheny County Medical Society (with the coöperation of the School of Medicine, University of Pittsburgh, and the hospitals of the city) conducted a week of postgraduate instruction in modern cardiology early in June. Fourteen doctors, seven of them from Westmoreland County, attended the demonstrations in the anatomy, physiology, pathology, and pharmacology of the heart, and visited seven of the Pittsburgh hospitals for intimate ward study of the practical application of scientific methods under the supervision of staff members.

THE FOURTH INTERNATIONAL CONGRESS of military physicians, surgeons, and dermatologists opened at Warsaw, May 30, with 300 delegates, representing thirty-six countries. The American delegation was headed by Colonel Gilbert E. Seaman of Milwaukee. The Americans deposited a wreath on the tomb of the Unknown Soldier in honor of Memorial Day. Germany, invited to the sessions for the first time, sent a contribution to the health exhibit. Russia was not represented, as invitations had been issued only to those countries belonging to the League of Nations and those represented in the League Red Cross societies.

AT THE 102D ANNUAL COMMENCEMENT of Jefferson Medical College, June 3, 138 received diplomas. Special awards were made to 22 of the graduates. The honorary degree of doctor of science was conferred upon Dr. Francis Xavier Dercum, emeritus professor of nervous and mental diseases, of the college, and Dr. Fordyce Barker St. John, professor of surgery, College of Physicians and Surgeons, Columbia University, who delivered the commencement address. Fifty-one members of the class received commissions as first lieutenants in the Medical Officers Reserve Corps of the United States Army.

THE DEPARTMENT OF THERAPEUTICS of the University of Pennsylvania is to receive a bequest of $100,000 to establish a research professorship in that department from the late Dr. Milton B. Hartzell, professor of dermatology of the University, who died in Fayetteville, Pa., last April. The bequest is to be used "to establish a research professorship of therapeutics in the University of Pennsylvania to be known as the 'Milton Bixler Hartzell Professorship,' and it is not to be combined with the teaching professorship on that or any other subject but is to be and continue as a research professorship exclusively."

AN OIL PORTRAIT OF Dr. J. Chalmers DaCosta, of Philadelphia, was presented to Jefferson Medical College, where Dr. DaCosta has served on the faculty forty years, by the Class of 1902 at the annual dinner of the Alumni Association, June 2, at the Penn Athletic Club. The dinner was attended by more than 600 physicians and surgeons from virtually every section of the country. Members of the association sat at tables by classes. At a table bearing a sign "The Old Guard" sat eleven gray-haired men, the oldest of whom was graduated fifty-seven years ago. He is Dr. S. L. McCarthy, of Altoona. He continues to practice, although 85 years old.

MORE THAN A HUNDRED NURSES of the Pennsylvania Hospital, Philadelphia, participated in a memorial service in the open air on the grounds of that institution May 30, and heard Dr. A. Ray Petty, pastor of the Baptist Temple, extol the virtues of the nurses who patriotically gave their services on the other side during the World War. The ceremony was held by the nurses of the Helen Fairchild Nurses' Post, No. 412, American Legion, the post of the Pennsylvania Hospital, at the base of the memorial tree which was planted on the hospital grounds in honor of the nurse for whom the post is named. Solemn was the moment when a wreath was placed at the foot of this tree, and taps came as a requiem to the dead of all wars in which the United States participated.

THE AMERICAN PROCTOLOGIC SOCIETY held its annual meeting in Philadelphia May 12-14. The first two days were given to the reading and discussion of scientific papers. On the third day a clinical conference was held in the Polyclinic Hospital, Philadelphia, at which interesting cases were presented for discussion by the members of the local committee. The newly elected officers for the ensuing year are: president, Dr. Louis A. Buie, Rochester, Minn; secretary-treasurer, Dr. Wm. A. Fansler, Minneapolis; representative to executive council, Dr. E. G. Martin, Detroit. The members and their wives enjoyed trips to the U. S. Navy Yard, Valley Forge, and to various historic spots of Philadelphia and suburbs. The meeting was the best attended of any of the annual meetings of this Society.

FOR THE FIRST TIME in the history of the American Otological Society, inc., the laity was invited to attend an open meeting which was held the night of May 20 at the Academy of Medicine, New York City, for the purpose of considering the subject of "Chronic Progressive Deafness" which is scientifically termed otosclerosis. A large number of people who are now deaf and others interested in the problem heard the discussion which was approached from three points of view: research, educational and social, and otological or scientific. The deaf were able to hear the discussion by the fact that an institutional acousticon was installed in the hall by the Dictograph Products Corporation and individual instruments were wired to the seats. Another unusual event of the meeting was a demonstration of the Osiso by lantern slides. The Osiso is a new instrument which converts sound waves into visible images which are easily read by those educated in its use.

THE FIRST PUBLIC REPORT of the alumnæ committee for the Greater Woman's Medical College of Pennsylvania announces a partial contribution of $100,750 towards its quota of $500,000 in the $1,500,000 building and endowment fund campaign now in progress. This represents money given or secured by the alumnæ of the College to June 8. Three of the gifts are contingent on seven other $10,000 gifts.

The campaign committee announced its general plans for the campaign in the fall at the time of the commencement exercises on June 8. Dr. Ellen C. Potter, advisory consultant of the New Jersey State Welfare Department and medical director of the North Jersey Training school at Totowa, N. J., is national chairman of the campaign. Mr. George Horace Lorimer, editor-in-chief of the *Saturday Evening Post*, is national vice-chairman and associate advisor with Dr. Potter. Mrs. James Starr, president of the Corporation of the Woman's Medical College of Pennsylvania, and Mr. Walter Lee Sheppard, a member of the Corporation, also are vice-chairmen.

A VERDICT said to be the largest ever returned in New York in an accident suit recently was reported by a jury before Supreme Court Justice McGoldrick, which gave to Dr. Joseph G. Yocum of Middletown, N. Y., $250,000 damages against the Interborough Rapid Transit Company because he was made totally blind as the result of being struck by a bolt from a subway door when a train was entering the Park Place station on December 21, 1921. The case had been on trial for two weeks. Dr. Yocum was the only witness for him-

self as to the circumstances of his accident, although many specialists were called to testify concerning his condition. As a result of the loosening of the bolt from an end door of the car, in the days before the present automatic attachments on subway cars, Dr. Yocum testified that the bolt struck him in the left eye, which was blinded at once. Blindness of the other eye developed later. Counsel for the Interborough contended that there was insufficient proof that the accident was due to negligence of the company, but Justice McGoldrick denied an application to set aside the verdict. It was said an appeal would be taken. The suit was brought for $500,000. Dr. Yocum testified that he had been a surgeon at the New York Skin and Cancer Hospital and the Presbyterian Hospital prior to the accident, and had an income of $150,000 a year. He has been receiving $400 a week on accident-insurance policies. He is 50 years old.—*New York Times.*

THE CORNERSTONE of a new $2,000,000 teaching hospital for the University of Pennsylvania's Graduate School of Medicine, in Philadelphia, was laid by Dr. Josiah H. Penniman, Provost of the University, on Tuesday afternoon, June 14. At a reception which followed in the partly completed building, Dr. George H. Meeker, Dean of the School, presided, and addresses were made by Provost Penniman; Dr. Wilmer Krusen, Director of Health in Philadelphia and President of the Philadelphia College of Pharmacy; and C. F. C. Stout, President of the Board of Managers of the Hospitals of the Graduate School of Medicine.

The new hospital, which is expected to be ready for occupancy about December 1 this year, will have more than 500 beds, and provisions to accommodate 175,000 outpatient visits per annum. It will receive all acute medical and surgical conditions, but will not receive chronic, contagious, or mental cases.

The new hospital will form the central unit in the organization of the University of Pennsylvania's Graduate School of Medicine, which School also participates in the medical-science work carried on in the main University buildings and is also allied in clinical work with other various prominent hospitals in the city. In conjunction with the remodeled Polyclinic Hospital buildings, the new plant, when completed, will completely replace the former Medico-Chirurgical, Polyclinic, and Diagnostic Hospital plants, which have become merged as parts of the Graduate School of Medicine.

BOOK REVIEWS

From a reviewer we expect information and advice which will guide us safely and to our profit, warning us of the poor, the mediocre, the commonplace, and inviting our attention to merit.

A TEXTBOOK OF MEDICINE. Edited by Russell L. Cecil, A.B., M.D., Assistant Professor of Clinical Medicine in Cornell University; Assistant Visiting Physician to the Bellevue Hospital, New York City; with Foster Kennedy, M.D., F.R.S.E., Professor of Neurology in Cornell University, as Associate Editor for Diseases of the Nervous System. W. B. Saunders Company, Philadelphia, 1927. Price, $9.

In this one volume of 1,500 pages, Dr. Cecil has collected the best medical efforts of himself and his 130 contributors. Each disease or group of diseases is treated by an authority on the subject. The result is highly satisfactory, and this volume will replace the more elaborate systems of medicine in the hands of many busy physicians. For example, one finds the last word on the treatment of pneumonia, and only 26 pages are devoted to it. The same holds true for practically all diseases met with in everyday practice. The section on diseases of the nervous system by Dr. Foster Kennedy will find a welcome in that the commoner diseases are treated in a brief and comprehensible manner. The reviewer does not hesitate to recommend this work.

A TEXTBOOK OF CLINICAL NEUROLOGY. By Israel S. Wechsler, M.D., Assistant Professor of Clinical Neurology, Columbia University, New York; Attending Neurologist, the Montefiore Hospital, New York. 725 pages, 127 illustrations. W. B. Saunders Company, Philadelphia, 1927.

The object of this book is to give a digest of what is known in neurology, the work being based mainly upon personal teaching and clinical experience. No great space is devoted to anatomy and physiology, the anatomic and physiologic facts of each clinical entity being outlined briefly during the discussion. References to literature do not appear in the text, but at the end of each chapter a few references are given bearing upon the topic. The volume is not profusely illustrated and, as stated in his preface, the author relies more upon reproductions of pathologic specimens and anatomic drawings to lend understanding to the clinical manifestations.

Part I, which is devoted to neurologic examination and interpretation of signs and symptoms, forms a valuable introduction to the subsequent pages; although, as the subject of mental deficiency is not discussed, the chapter on psychometric tests might well have been omitted. Diseases of the cord and peripheral nerves are presented in Parts II and III. Suggestions as to treatment embody only the most modern practices, and those which have proved most helpful to the author.

Approximately one half of the volume, Part IV, is devoted to affections of the brain. Little reference is made to the so-called psychoses, although brief mention is given to general paralysis and to the mental disturbances associated with cerebral arteriosclerosis and the senile state. Such endocrine disturbances as have definite neurologic implications are noted, but there is no general consideration of the diseases of the ductless glands.

The discussion of the neuroses, Part V, is less complete than their frequency and importance might warrant. Psycho-analysis is credited with offering the most consistent psychologic approach in the study of these patients, but the author wisely stresses the point that it should be practiced only by those who are properly qualified and well trained.

As a whole, the book is attractive, each clinical entity is clearly defined, and the recommendations as to treatment are practical in every instance.

MANAGEMENT OF THE SICK INFANT. By Dr. Langley Porter, Professor of Clinical Medicine, University of California Medical School; and Dr. Wm. E. Carter, Instructor in Pediatrics, University of California Medical School. St. Louis: C. V. Mosby Company. Price, $8.50.

The third edition of this now well-known book fully maintains the high standard of the former two editions.

The general plan of this edition is the same as formerly. Part I includes chapters on general considerations, vomiting, diarrhea, constipation, nutrition, hemorrhage, pain and tenderness, convulsions and syncopes, fever, cough, and prematurity.

In the chapter on hemorrhage it is stated: "Autopsy shows that about half of the infants who die within a week after their birth have suffered intracranial hemorrhage. The blood may be over the cortex, at the base, or intraventricular." They quote Warwick and Rodda as suggesting an increased bleeding and clotting time in many infants who suffer from these hemorrhages and that many of them have hemorrhagic disease of the newborn.

Part II follows the usual text method of diseases of the respiratory tract, digestive tract, heart and circulation, etc. Part III includes much useful information on the various methods concerned in blood-serum and vaccine treatments, also on lumbar punctures, gastric lavage, etc. The chapter on formulas and recipes is helpful, and the one on drugs is good and conservative.

The book is a good one and any one who sees much of infants will find it a valuable addition to his library.

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ILLINOIS STATE SOCIETY PUBLISHES HISTORY

Doctors who lived formerly in Illinois, or who are descendants of pioneer physicians of the "Illinois country" will hear with interest that Volume One of the *History of Medical Practice in the State of Illinois* is ready for delivery.

The history has been written under the supervision of a committee appointed by the Illinois State Medical Society as a commemoration of its seventy-fifth anniversary but more especially to make a living tribute to those valiant men of the medical profession who played so able a part in the exploration, settlement, and development of the Illinois country.

In this first volume are set down events from the earliest available knowledge of conditions in the Illinois country, along through the days of the aborigines, and commencing with the actual records when, in 1673 Father Marquette had medical attention in Chicago, up until the year 1850.

In the second volume (now in preparation), narration continues up until the present time. Future years will bring other volumes, so that this history will be an ever virile monument to the men and incidents whom it would honor.

It must be remembered that originally the Illinois country encompassed a territory far greater than the area now known as the States of Illinois, Wisconsin, Indiana, Missouri, Kentucky, and Iowa, as well as what is now Illinois, and even some sections of Ohio fell into that primitive epitome of the Illinois country. In the southern part of the State it was well into the nineteenth century before Missouri and Illinois acknowledged the natural divorce of interests made by the Mississippi River. Because of this, naturally enough, close interest in this history extends to physicians or to their descendants in practically every state in the Mississippi Valley or contiguous thereto.

This *History of Medical Practice in the State of Illinois,* embodies, in the course of its narration, an interesting and illustrated digest of the early efforts of white settlers in Illinois, with specific allusion to the

(Concluded on page xviii.)

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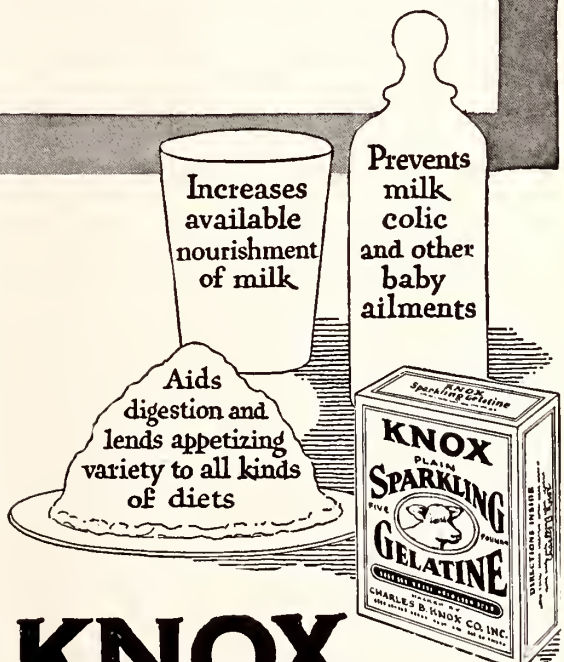
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ILLINOIS STATE SOCIETY PUBLISHES HISTORY

(Concluded from page xvi.)

share in these tasks performed by medical men. Included are portraits of rare interest, reproductions of historic documents, excerpts from diaries, personal letters, human reminiscences of days fraught with peril, filled with hope, and not devoid of humor, through a period of about 250 years. From the days of the "Chirugeon" who attended Père Marquette, through the massacres at Fort Dearborn, the years of Indian raids, down with the circuit-riding "saddle-bag" doctors, to these days of radium and radio, this history marches. Attics, family albums, safe deposit vaults, and State records have been ransacked to produce the material needed for this chronicle. Hospitals, asylums, sanitariums and allied institutions, and medical colleges are set forth in detail, both pictorial, documentary, and narrative. In brief, this account epitomizes the almost unequaled growth of a community whose economic wealth is paralleled by its public health.

The edition is limited. It will not be reprinted. Volume One is now ready. Volume Two will follow soon. Orders may be sent to Committee on Medical History, Illinois State Medical Society, Medical and Dental Arts Building, 185 North Wabash Avenue, Chicago, Illinois.

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CARDIOVASCULAR SYPHILIS*†

ALDRED SCOTT WARTHIN, Ph.D., M.D.
ANN ARBOR, MICH.

No disease has been more extensively advertised than cadiovascular disease. During the last several years, life-insurance companies, life-extension organizations, and various forms of preventive-medicine associations have utilized as propaganda the apparently great increase in mortality rate from affections of the heart and blood vessels. The atmosphere of apprehension produced by this publicity is reflected in numerous articles on cardiac disease in our journals and magazines and in the daily press. In the so-called "health talks" of the latter, especially, has this subject been given great prominence, and there is scarcely a layman who reads the papers who is not aware of the fact that cardiac disease is said to be on the increase and of the very high mortality resulting from the same.

This is all very well so far as it goes. It is essentially important that laymen should have information concerning the most common and important diseases, their causes and their prevention. To the writer, however, it seems that in creating this agitation concerning the great frequency of heart disease we are either very ignorant or not very frank as to both of the things that the layman needs especially to know. Rheumatic fever, various acute infections, particularly those caused by streptococci, latent focal infections of tonsils, teeth, gall bladder, etc., and the still more vague etiologic factors of overeating, excessive protein diet, overwork, nervous excitement, and worry constitute the chief causes adduced in the explanation of the marked increase of cardiac and vascular affections. As a matter of fact, an analysis of the vital statistics shows that this great increase in cardiac deaths is not the result of a great increase in valvular disease due to acute infections, but to an increase in deaths due to cardiac insufficiency resulting from so-called "myocardial degeneration," "chronic myocarditis," or "fibroid heart." Nevertheless, the majority of clinicians fall back upon "rheumatism" as the chief etiologic agent concerned, and very few of them consider syphilis as an important causal factor in the production of myocardial insufficiency. Syphilis is usually not considered at all in this connection. If the cardiac case shows no evidences of a valvular lesion, and if nephritis or generalized atherosclerosis are not present, still the clinical diagnosis will be "rheumatic heart." It makes no difference whether the patient has a history of having had rheumatic symptoms or not. Moreover, the great majority of patients, when interrogated as to the previous occurrence of "rheumatic pains," will give a positive answer, as very few individuals have not at some time in life had vague joint or muscle pains called almost invariably "rheumatic." Moreover, the cardiologists of the day seem either to have forgotten or never to have heard of the existence of "syphilitic rheumatism," a symptom complex of muscle and joint pains without fever or painful swelling, and usually worse at night. There can be little doubt that many of these so-called rheumatic pains in many of the cardiac cases belong in this category, and should serve as aids in the diagnosis of syphilis instead of being wrongly interpreted as evidences of rheumatic fever. Rheumatic fever as a cause of heart disease, while of very great importance, has become somewhat of a fetish to the cardiologist, who in the absence of mitral stenosis or insufficiency falls back upon this disease in explanation of any vague myocardial insufficiency.

In the writer's experience, however, the great majority of such cases present a different pathology and etiology, and he has found abundant evidence that latent syphilis rather than rheumatic fever is the chief etiologic factor in the production of myocardial disease in the middle years of life. In the autopsy material coming to the pathological laboratory of the University of Michigan there have been many patients that have died in various clinics, some after operation or as patients in the department in internal

*Read before the General Meeting of the Medical Society of the State of Pennsylvania, Philadelphia Session, October 13, 1926.

†From the Pathological Laboratories of the University of Michigan, Ann Arbor, Mich.

medicine, with the clinical diagnosis of cardiac insufficiency or cardiac decompensation without valvular lesions and in the absence of nephritis. In the older patients a greater or less degree of atherosclerosis is usually present, but this is generally not regarded as the cause of the cardiac condition. As mentioned above, a hypothetical rheumatic fever in early life is usually adduced as an etiologic factor. At autopsy, these hearts always show hypertrophy and dilatation of the ventricles, particularly the left, in varying degrees. Often these gross appearances are relatively slight. Cross sections of the myocardium of the ventricle walls and septum will practically always reveal some fibrosis, from slight traces up to extensive patches. In other cases, of more severe and acute type, the myocardium may present irregular pale patches or streaks without hemorrhage or pigmentation. These may be easily mistaken for anemic infarcts, but differ from them in their greater translucency and lack of hemorrhagic borders. While these changes may be associated with valvular lesions incidentally, in the majority of syphilitic hearts no valvular lesions are present, and there is only a general thickening of the endocardium, both valvular and parietal. In the aortas of these patients there is always more or less atherosclerosis or a well-defined gross picture of syphilitic aortitis. Usually, the latter is covered up by the secondary atherosclerosis, and the syphilitic process is revealed only on microscopic examination.

When the myocardium of such hearts is examined microscopically there are found either patches showing an increase of the stroma cells, histiogenic lymphocytes, plasma cells, monocytes, and fibroblasts, or a fibrosis. These areas are diffuse or patchy; they are not sharply circumscribed; they are not nodular except when gummatous in nature, and the formation of gummata in the myocardium is relatively rare. The characteristic syphilitic lesion of the myocardium is the slight diffuse cellular proliferation, or histiogenic infiltration. The septum, the anterior wall of the left ventricle towards the apex, the papillary muscles, and the posterior wall are the parts chiefly affected; the process may occur in any portion of the heart wall, sometimes to a very marked degree in the auricles. When there is an associated syphilis of the aortic valves with aortic insufficiency the syphilitic cellular infiltrations are often very marked at the base of the heart, involving the auricles and extending along the coronary branches. The vasa vasorum of the larger coronaries practically always show perivascular accumulations of plasma cells and monocytes. Beneath the endocardium there are often one or two layers of hyperchromatic nuclei arranged almost as if in single file, consisting of plasma cells and large mononuclears derived from the reticulo-endothelium. These cellular infiltrations and proliferations may be apparently of great chronicity; eventually they produce fibrosis, so that a diffuse or patchy area of scarring results.

The heart muscle itself may appear perfectly normal in these cellular areas; it apparently suffers little direct damage; there is but little or no evidence of any toxic action exerted upon the muscle. Even in the midst of large cellular areas the heart-muscle fibers are often hypertrophic. As fibrosis begins, atrophy and fatty degenerative infiltration of the muscle take place, and ultimately the fibers may remain in the scar as atrophic fibers or may wholly disappear. These changes in the muscle appear to be nutritive rather than toxic, and are probably the result of pressure and lessened oxygen and food supply. As the new-formed stroma develops between the muscle fibers, it is frequently myxedematous in character, staining bluish, containing numerous vacuoles, and giving specific reactions for mucin. In its older stages the new-formed stroma becomes dense and hyaline. Ultimately the histologic picture is that of an atrophic myocardium showing diffuse or patchy fibrosis, and the cardiac dilatation and insufficiency result from these conditions.

In the great majority of syphilitic hearts the lesions described above are of relatively slight degree, and apparent only on microscopic examination. The writer, however, has never examined a heart from a male syphilitic without finding somewhere in the myocardium small lesions of this character. In female syphilitics they may be wholly absent, or very slight in degree. Nevertheless, in a small number of colored female syphilitics as marked myocardial lesions as are ever found in any male have been seen. That these small and often insignificant infiltrations and interstitial proliferations of the myocardium are syphilitic was definitely shown by the writer in the years 1906-12, by the demonstration of the Spirochæta pallida in them.

In the year following Schaudinn's discovery of this organism, the writer found in the hearts of congenitally syphilitic infants various pathologic lesions characterized by interstitial edema, cellular proliferations, and lymphocyte and plasma-cell infiltrations. Spirochetes were found to be present in these in great numbers, and the existence of syphilitic myocarditis in the newborn was conclusively proved to exist, and to be a cause of cardiac insufficiency and death

in congenital syphilis. As opportunity presented for the study of older patients with congenital syphilis, it was found that congenital syphilitic myocarditis could show itself in severe form and cause death in childhood or young adult life (cases of boy of 14, youth of 19, girl of 22 years of age, all three dying of cardiac incompensation due to extensive myocardial lesions consisting of cellular infiltration and proliferations shown to be syphilitic by demonstration of spirochetes within lesions).

From the study of congenital syphilis of the heart the next step was a study of the myocardium in cases of acquired syphilis. The earliest cases studied were the hearts from individuals dying suddenly without previous symptoms of cardiac disease. In these hearts cellular infiltrations and proliferations were found in the wall of the left ventricle and septum, and the Spirochæta pallida was demonstrated in these lesions. Continuing these studies routinely on the heart in autopsy cases coming into the writer's laboratory, it was found that a surprisingly large number showed myocardial lesions of the type described above in varying degrees, and spirochetes were demonstrated in a large proportion of these, so often as to leave no doubt in the writer's mind that these lesions were invariably syphilitic in nature. These cases included patients with a known syphilitic infection, cases of syphilis under treatment, cases supposedly cured clinically, cases with no history of syphilis, without symptoms, with negative Wassermann, etc. Similar lesions in the myocardium with spirochetes were found in all. To check up the occurrence of myocardial involvement in syphilis, a study was then made of a large number of hearts obtained from paretics and tabetics dying in the Michigan State Asylums. Myocardial lesions of the same type were found constantly in these, in varying degrees from very slight active infiltrations associated with extensive fibrosis to very active cellular infiltrations and proliferations.

From these studies, which have been published in a number of papers during the last twenty years, the following conclusions were drawn:

1. Latent syphilis is very common in the rural population admitted as patients to a state hospital that receives large numbers of county charity cases, often showing in 30 to 60 per cent of the yearly autopsies. The majority of these patients are middle aged or in early old age. Clinically, they present the picture of cardiovascular inadequacy, and die, often suddenly or after operation, from myocardial insufficiency.

2. At autopsy these cases show cardiac hypertrophy and dilatation, myocardial fibrosis and atrophy, atherosclerosis of the aorta, early arteriosclerotic kidneys, general passive congestion and atrophy. Microscopically, syphilitic infiltrations and proliferations are found almost invariably in heart, aorta, liver, pancreas, testes, adrenals, and central nervous system, particularly with thickening of the leptomeninges. In all of these, spirochetes have from time to time been demonstrated.

3. The majority of these cases have shown a negative Wassermann reaction.

4. Latent syphilis is not uncommon in the rural population of Michigan entering a State hospital because of diverse disabilities. The great majority of these patients die as cardiovascular cases.

5. Well-defined but often only microscopic lesions are found in the heart and aorta of all male patients belonging to this group. Spirochetes have been demonstrated in these lesions in such a majority of cases that the writer is convinced of their specificity.

6. Myocardial death occurs in old latent syphilis as the result of spirochete localization in the heart wall, slow fibrosis and atrophy of the muscle, and eventually myocardial inadequacy. To the direct action upon the myocardium is added the result of the changes in the aorta and other portions of the vascular system that are practically always present also in latent syphilis.

Less frequent than the latent lesions of the myocardium described above is the occurrence of more acute and severe exacerbations of the syphilitic process in the heart wall. In the first number of the *American Heart Journal* the writer has reported eight cases of sudden death due to this cause, seven of these being coroner's cases; and since that report three other cases have occurred in his autopsy service, the last patient being a boy of twenty-three years of age with malignant syphilis, from Dr. Udo Wile's Clinic.

The clinical history of these cases varied greatly, a history of previous syphilitic infection was obtained in some and denied in others. In all of these first eight cases reported, with one exception, death took place suddenly and unexpectedly with slight or no prodromal symptoms. The hearts in all cases were dilated, no valvular lesions were present, and the gross appearance of the aorta was that of relatively slight atherosclerosis. In the myocardium of both ventricles and septum, and extending into the musculature of the auricles there were present pale, grayish or yellowish-gray, translucent patches, without hemorrhagic borders or pigmentation. Microscopically, these patches consisted,

not of dead heart muscle, but of areas of interstitial infiltrations and proliferations of syphilitic character, associated in some of the cases with an abundant leukocyte infiltration. Spirochetes were demonstrated in great numbers in these lesions. Small miliary gummas were present also in several of these cases. In the aortas, on microscopic examination, small active syphilitic infiltrations were found about the vasa vasorum.

These cases represent a more malignant type of syphilitic affection of the myocardium, and it is especially interesting that the heart alone may be the seat of such active and severe lesions, while in other parts of the body the syphilitic process is relatively very slight. The case of the young boy of twenty-three is, however, a notable exception to this. He had more than three hundred extensive skin lesions, and active syphilitic lesions occurred in other organs besides the heart. His aortic lesions, however, were very slight, and there was no involvement of the aortic valve.

So far as aortic syphilis is concerned, the most common form is the presence in the adventitia and the media of small plasma-cell and monocyte proliferations about the vasa vasorum. These may be very slight, but often are extensive. In some degree they have been found in the aorta in every case of syphilis examined at autopsy, except in the majority of female syphilitics. In our experience, aortic lesions are only infrequently found in the female. When very extensive, the lesions of syphilis of the aorta may be recognized in the gross in the form of irregular thinnings, cracks, or fissures with a bluish translucency; often these have a longitudinal arrangement. A certain amount of atherosclerosis is always present, however, and may so conceal the syphilitic process that its recognition is possible only on microscopic examination. The microscopic appearance is wholly characteristic, and is not produced by any other process but that of syphilis. Spirochetes have been demonstrated in these lesions so often that their specific character is established.

Syphilis is essentially a disease of the vasa vasorum, showing itself by perivascular infiltrations most marked in the adventitia and extending along the vessels in their course through the media. The arterioles become thickened and finally obliterated. As the result of this obliteration there is a slow infarction of the intima, gradually extending into the media, leading to a hyaline fibrosis. The picture of aortic sclerosis is thus produced; the muscle and elastic tissue of the media are gradually replaced by hyaline connective tissue from the inner side of the vessel towards the adventitia, and in severe cases the entire vessel wall becomes fibroid. Aneurism or rupture of the aortic wall then becomes a possibility, and occurs in a certain proportion of cases. The term "syphilitic mesaortitis" is a misnomer for the process, as I have elsewhere pointed out; it is better to designate it simply as syphilis of the aorta. While the ascending portion of the arch is almost always involved in the syphilitic process, any portion of the aorta may be attacked, and the most extensive lesions are sometimes found in the descending aorta, especially above the bifurcation. In the majority of syphilitics we find only this relatively mild form of aortic syphilis, without aneurism and without aortic-valve insufficiency. It usually develops in the course of the disease, ten to twenty-five years after the initial infection, yet the most severe forms leading to involvement of the aortic valve or to aneurism may develop in young people and within a short time, one to three years, after the chancre.

The milder forms of diffuse syphilitic aortitis are usually not recognized clinically; practically only those associated with aneurism formation or insufficiency of the aortic valve are recognized by the clinician, and to many clinicians these two conditions alone mean aortic syphilis. The roentgenological examination usually throws no light on the diagnosis of the uncomplicated forms of syphilis of the aorta. When the affection becomes of clinical importance the physical signs are those of advanced sclerosis of the aorta, and vague subjective symptoms of aortalgia in the form of precordial pressure and distress, tenderness to the left of the sternum, and along the left side of the spinal column corresponding to the II-IV segments. Pain extending down the arms, particularly the right arm, and ill-defined epigastric distress have been prominent features of the cases seen by the writer. As to the clinical diagnosis of aortic syphilis in the presence of aortic insufficiency and aortic aneurism there should be no great difficulty, but it is surprising how many of the latter cases escape diagnosis, particularly in abdominal aneurism. The term "latent aneurism" should be a reproach to the diagnostician.

The really important thing for the clinician is to have the possibility of syphilis constantly in mind, especially so in all cases of cardiovascular disturbance in the middle years of life and in young people. He should be fully cognizant of all the pathologic possibilities of syphilis. It is well to recall the axioms of the great syphilologists of the last century, and of a great

internist, Osler: "Know syphilis and you will know the greater part of medicine."

Undoubtedly the clinician of the present day has lost much skill in the diagnosis of syphilis; he does not know the pathology of the disease sufficiently well as to be always on the look-out for its protean manifestations, and especially because he has come to depend mainly upon one thing—the laboratory report of a negative or positive Wassermann reaction. With too many clinicians today this constitutes practically the whole diagnostic effort made so far as syphilis is concerned. An enormous amount of harm has undoubtedly resulted, especially in so far as the interpretation of a negative Wassermann is concerned. A very large proportion of the late latent cases of syphilis give a negative Wassermann, even in the presence of active lesions and spirochetes. The same thing is true of some of the most virulent exacerbations of the disease. The clinician, therefore, who is bound too slavishly to rigid conceptions of the Wassermann reaction will too often fail to realize the actual presence of syphilis in his patients and to evaluate properly the significance of the latent forms of this infection. It is because of their lack of knowledge of the pathology of syphilis that we find some clinicians denying the frequency or even the occurrence of syphilis of the heart. The same criticism applies to certain pathologists who report series of autopsy examinations of the heart without finding evidences of syphilis in the heart or aorta. It is hardly likely that the writer's experience is unique, and that autopsy material varies greatly in different parts of the country. It is much more likely that such discrepancies are the result of differences of criteria, failure to make thorough histologic examinations and to demonstrate the existence of spirochetes in association with certain types of lesions. On the clinical side, however, we have men like Harlow Brooks, Wearn, and others, who recognize the importance and frequency of syphilis of the heart and vascular system, and there is a growing number of cardiac cases reported which show pathologically active spirochetal lesions (Boyd and others), so that the recognition of syphilis of these organs is increasing.

As to the histologic lesions described by the writer as being associated with a localization of spirochetes, these were correctly interpreted long ago, before the days of the spirochete, as being syphilitic in nature. As early as 1858, Virchow described a "simple interstitial form of myocarditis," associated either with gumma or without it, as being due to syphilis. He showed that similar lesions occurred practically anywhere within the body tissues and organs. Later, Adler described the interstitial myocarditis of the newborn, and correctly interpreted it as syphilitic in nature, also before the spirochete was discovered. What the writer has done was to rediscover independently these lesions and to prove conclusively that they are syphilitic in nature by demonstrating spirochetes in them. In that respect he has advanced our knowledge of the pathology and symptomatology of syphilis. When the importance of these conditions is fully recognized, then we may expect a more intelligent as well as a more frank effort to lessen the incidence of myocardial disease and to reduce accordingly the high rate of cardiac mortality.

Symposium on Industrial Surgery*

PROBLEMS IN THE TREATMENT OF SUPERFICIAL BURNS†

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In the summer of 1923, Dr. L. K. Ferguson and I were given the cases of superficial burns admitted to the University Hospital to study. The mortality under the older methods of treatment had been so high it was felt that a detailed study of the cases might lead to a method of treatment which would reduce the all too high death rate.

The clinical picture of these cases is very complex. For this reason many theories have been expounded to explain the changes observed in burned patients. Although no single theory explains the entire symptom complex, sufficient experimental investigations have been carried out to explain in a measure the various phenomena.

It would be impossible to review all of the experimental work in detail, so I will merely outline the observations of Robertson and Boyd of Toronto, of Vaccarezza and his associates at Paris, and those of Dr. Ferguson and myself.

From the experimental work which has been done, the following facts seem to be proved:

First: The toxin which gives rise to the toxemia is developed by the application of heat to the *living* tissues. An extract made from the skin of an animal burned after death and injected into a healthy living animal causes no symptoms, while a similar injection made from the skin of an animal burned while alive pro-

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duced a typical toxemia. The toxic symptoms do not occur if the burned area is excised within eight hours after the burn; while transplantation of the burned skin to a healthy animal produces the constitutional reaction.

Second: The toxin is carried by the blood stream. Ligation of the major vessels of the burned part prevents the development of the toxemia, and transference of this blood supply to a healthy animal causes death of the unburned animal. The injection of blood removed from toxic burned patients into healthy individuals results in a transitory toxemia.

Third: The toxin is carried by the red blood corpuscles. It is in or is absorbed by them, since whole blood carries the toxic principle, while the blood serum of these patients is nontoxic except in very large doses.

Fourth: The toxins of the burn are formed very rapidly, for the removal of the burned area more than eight hours after the burn has occurred does not prevent the toxemia, and ligation of the major vessels draining the part must be performed within two hours to prevent the constitutional reaction resulting from toxin absorption.

It is our belief, therefore, that those theories which attempt to explain the phenomena as the result of the absorption of toxic substances formed at the site of the burn are the most convincing and are most strongly supported by the clinical evidence.

From the viewpoint of treatment, three stages must command the attention of the surgeon. The first is that of shock, the second toxemia, and the third repair.

Shock

The burn causes a sudden and severe shock of the nervous system. The capillaries dilate, especially in the area of inflammation. The dilated, damaged capillaries are more permeable to fluids, and there occurs a pouring out of serum. The fluid loss will depend upon the extent of the tissue destruction. Underhill has found a marked blood concentration in these cases, and this must be borne in mind during the stage of shock, since the fluid loss acts in a vicious circle to prolong the shock. The alteration of vasomotor tone resulting in capillary dilatation and the increase in blood concentration coincident with fluid depletion both produce a low systolic pressure. The capillary dilatation permits of more rapid heat dissipation, with a resulting subnormal temperature. Underhill says: "Marked concentration of the blood means a failing circulation, an inefficient oxygen carrier, oxygen starvation of the tissues, fall of temperature, and, finally, suspension of vital activities."

During the state of shock the mortality varies according to the age. The indications for treatment are to relieve the pain and to prevent heat dissipation and fluid loss. However, since toxin absorption is going on during this period, some means must be taken to prevent its absorption and distribution.

Toxemia

If means are not taken to prevent toxin absorption as early as possible, the shock will be succeeded by a constitutional reaction resulting from toxin accumulation. This is usually manifest within forty-eight hours after the burn has occurred. There results a febrile state, the patient becomes drowsy, and vomiting is not unusual.

It has seemed to us that the most rational method of controlling or preventing the toxemia should consist in some form of local treatment aiming to prevent toxin absorption. The less radical method of depending upon renal elimination of the toxin is antiquated. There are at our disposal four methods of preventing or controlling toxin absorption:

(1) The antilysis of the burned tissues and their products may be prevented or retarded by changing the local reaction of the tissues. One of our associates is at present conducting a series of experiments on fluid absorption, and slight local changes in the hydrogen-ion concentration of the part undoubtedly plays a part in this process. Furthermore, Wiener has shown that intracellular proteases act only in a faintly acid medium, while a slightly alkaline reaction entirely checks their activity.

(2) Every surgeon who has utilized débridement of the burned tissue as a means of preventing or lessening the toxemia once it is established cannot but have been impressed with the satisfactory results which are obtained. This rather heroic treatment must needs be done after the patient has reacted from shock, or it may prove fatal.

(3) It has long been known that vasoconstriction prevents absorption. This is the rationale for the use of adrenalin with novocain. It, therefore, occurred to us that a drug having a vasoconstrictor action might be used to prevent toxin absorption until such time as a more radical method could be employed. This work was begun, and cases were treated before the contribution of Douglas on "Rate Absorption after Vasoconstriction." Not only does the adrenalin lessen toxin absorption, but the vaso-

constriction prevents fluid loss and thus aids in overcoming the shock.

(4) The fourth method of checking toxin absorption is by coagulation or precipitation of the damaged proteins. The use of tannic acid to produce this effect has been suggested by Davidson, and has met with considerable success. There must occur more than a coagulation of the proteins, since the heat of the burn will, in many instances, cause coagulation. This is especially true in the scalding burns, where microscopic examination of the destroyed tissues shows typical coagulation.

Repair

The final stage is that of repair. I am not discussing the so-called stage of infection, since this should rarely occur in the properly treated case. The rehabilitation of the patient by early repair of the damaged part is of the utmost importance. Skin grafting, if this is necessary, should be done early. The type of graft will vary, and as John Staige Davis has said, "Each extensively burned patient needs not one but twenty varieties of treatment, of operative procedures, of forms of skin grafts, and no one rule can fit all burns."

What, then, should be the procedure for treatment? We believe that at the present time two methods offer the best chance of ultimate recovery. The first is the one described by Dr. Ferguson and the writer over two years ago.

We have tried to meet the indications for treatment in the following manner: As soon as the patient is admitted he is given enough morphin or camphorated tincture of opium to relieve the pain in a large measure. The clothes are removed about the burn, at least, or entirely if the condition permits. The burned area is then kept wet with compresses of a one-half-per-cent novocain solution which contains adrenalin solution in a ratio of 25:1. The patient is then placed naked under an electric-light cabinet where the temperature is maintained at body heat. Fluids are forced by mouth. Usually, little difficulty is encountered in this procedure, and the patient lies comfortable and contented in his warm bed and is willing to take all the water you give him. We do not believe in enteroclysis, and have never found it necessary to give hypodermoclysis in these cases. They tend only to make the patient more restless, and serve no real purpose since fluid by mouth is the method par excellence. That fluid in this way suffices for any fluid loss can be seen in hemoglobin estimations, which in our own cases treated from a short time after the occurrence of the burn never rose over 100. Even in the late cases, one of which had a hemoglobin percentage of 126, fluid by mouth rapidly restored the blood volume, and the hemoglobin dropped in a short time to within normal limits. The only further indication which we see at this period is for transfusion. In the severe cases it should be done early and repeated frequently.

We, then, relieve the pain with a local anesthetic and general analgesic, we reduce the fluid loss by local vasoconstriction, and compensate for fluid depletion by supplying fluids. We prevent heat loss by maintaining an even external temperature and overcoming capillary dilatation, and, what is more important in the subsequent course of the case, we reduce the toxin absorption by local vasoconstriction. The denudation of the toxin-bearing skin is done as soon as the patient's condition warrants it. In extensive burns it should not be done too early, or the procedure will result in a reappearance of the shock, and death may result. Reliance in these cases should be placed on the adrenalin to prevent toxin absorption in the interim. Its percentage may be increased if necessary. In many of the cases the skin becomes parchmentlike in from thirty-six to forty-eight hours. In these cases débridement may be delayed for an indefinite period, and the compresses may be removed, since after this occurs toxin absorption is reduced.

In late cases the indications for treatment are necessarily radical and immediate because of the rapidly fatal results which usually follow. The condition has now become a toxemia, and our problem is one of ridding the body of the toxin.

The more conservative methods of depending on renal elimination are helpful, but usually not rapid nor certain enough. We have practiced, therefore, the method of "exsanguination transfusion," suggested by Robertson. If a case is admitted in toxemia, or if a patient under observation begins to get drowsy and vomits, and shows a marked rise in temperature, we utilize this procedure before débridement. In several cases it appears to have turned the scales in favor of the patient. We have not hesitated to repeat this procedure, in cases in which the symptoms continue.

The cases in our own series that have had novocain-adrenalin packs from the beginning and early excision of the burned area did not present the symptoms of severe toxemia. The cases that did were either admitted late or were ones in which we allowed too long a time to elapse after admission before we removed the burned tissue.

Within a short time, usually three or four days after the excision of the burned tissue, all the toxic symptoms abate, and the treatment is then only that of the local wound. After removal of the novocain-adrenalin packs we apply packs of normal saline solution or dichloramin-T. We prefer the salt solution since dichloramin-T causes crustation of the wound. The wound should be dressed under the strictest aseptic precautions. If this is done, it is rare to encounter infection.

In our study of the cases treated by this method we made an attempt to substantiate the laboratory findings of other investigators. Complete blood studies were done with the following results: The blood-urea nitrogen was never increased to such an extent as to jeopardize the life of the patient. The highest blood-urea nitrogen was 27 mgm. per 100 c.c., and this was in an adult with an extensive third-degree burn. We do not believe that these patients die from uremia. Estimations of the total nonprotein nitrogen do not offer much hope that this factor is associated with the cause of death in these cases. Although numerous writers have suggested acidosis as a cause of death, the estimation of the plasma carbon dioxid showed this to be within normal limits, with the exception of two cases in which a definite alkalosis was present due to the administration of sodium bicarbonate. We do not believe that ingestion of this drug is of any value in the treatment of burns. The hemoglobin estimation was higher than normal in those cases in which treatment had been neglected over a period of six to eight hours after receipt of the burn.

All of our cases have not been severe burns, but it is significant that severe toxic symptoms developed in only two of the series. We believe this low incidence of toxemia is due in large part to early excision of the burned tissues, and to the local vasoconstriction induced by our adrenalin-novocain packs.

We are indebted to Davidson for his contribution on the use of tannic acid in the treatment of burns. The method of procedure is as follows: As soon as the patient is seen, he is given a relatively large dose of morphin sulphate hypodermically (for an average adult one-quarter grain) to alleviate the intense pain. The burned area is then covered with dry sterile gauze pads which are held in place by sterile gauze bandages. This dressing is then soaked with a 2.5-per-cent aqueous solution of tannic acid. This is thought to be the most desirable concentration, although solutions as dilute as 0.75 per cent and as concentrated as 5.0 per cent have been used in some cases described. It is essential that the tannic-acid solution be made up fresh before use, because it deteriorates upon standing, with the formation of the far less astringent gallic acid.

In order to prevent the deep caustic tissue injury found by Schuetz to follow the application of concentrated tannic acid, small sections of the dressing have been opened for inspection at the end of 12 hours, 18 hours, and again at the end of 24 hours. As soon as the part is found to have assumed a light-brown color, all dressings are removed. In order to facilitate removal of the dressings without pain to the patient and without causing further trauma, it has been found desirable to wet the gauze with fresh tannic-acid solution shortly before this is done. The wound is thereafter left exposed to the air, but is carefully protected from mechanical injury, chilling, and bacterial invasion by a suitable cradle draped with sterile linen. In the more serious cases, artificial heat has been supplied by placing within the cradle so prepared one or more ordinary electric-light bulbs.

In a few cases 5-per-cent tannic-acid ointment (made with equal parts of vaseline and lanolin as a base) was substituted for the aqueous solution. Although it appeared to have a definitely beneficial effect, it is far less efficacious than the former. The chief value of the ointment is in its use about the eyes, where the astringent solution cannot be used with entire safety.

One of the most essential features of the management of all burn cases is that of keeping up the fluid balance in the body. This is accomplished by forcing fluids by mouth, where possible, or by hypodermoclysis, proctoclysis, or intravenous infusions, according to the special indications in each case. Blood transfusion has been employed in some of these cases, apparently with favorable effects.

The conclusions which he draws from this method of treatment are:

1. The preliminary treatment of burns with tannic-acid compresses followed by exposure to air lessens toxemia.

2. After coagulation of the devitalized tissue with tannic acid, the application of a wet boric-acid dressing apparently causes a return of toxic symptoms.

3. Tannic acid as an initial dressing on a burn is analgesic.

4. The subsequent use of the open-air method causes minimal trauma and promotes general comfort.

5. The local astringent effect prevents the loss of body fluid.

6. Secondary infection is markedly limited by

the absence of a favorable nidus for bacterial growth.

7. Scar-tissue formation has been less marked than that observed after treatment by other methods.

8. The protective layer of coagulated protein forms a scaffold for the growth of the young epithelial cells over the denuded surface.

That this method has distinct advantages over our own in many cases is not to be denied. In the second-degree burns, however, we believe that novocain and adrenalin packs will satisfactorily answer any purpose. In those cases of third-degree burns of lesser intensity, that is, those in which we are led to believe that the hair follicles are not destroyed, less tissue destruction and earlier repair will follow the tannic-acid method. In the deeper third-degree burns of lesser extent, where all the epithelium and the subcutaneous fat has been damaged beyond repair, débridement in a properly prepared patient gives excellent results. The improvement, in these cases, is nearly immediate. The indecision as to whether or not débridement should be done demands some judgment. The devitalized patient may not be able to stand it if the area is large; infection is apt to follow, unless the postoperative technic is scrupulous; and skin grafting must be performed early.

The chief disadvantage of the tannic-acid method in the deeper burns which involve the fat is the frequency of infection. The fat in these cases is the site of an extensive cellulitis, and even in early cases it gives evidences of having been severely damaged. This devitalized fat offers a nidus for infection, and death may result if the infection is not recognized early and properly treated.

That both methods have a field of usefulness can hardly be doubted. In either method, estimations of the plasma chlorids should be done, for as Davidson has shown, the blood chlorids remain low as long as the burned tissue is not removed. In view of this finding, any deficiency which exists should be corrected, although enough work on this factor has not been done to ascribe too much importance to it.

The percentage of deaths is high, too high for modern surgery to accept. It is higher than that after operations for acute appendicitis with peritonitis or gall-bladder disease. And yet these desperately sick patients are only too frequently treated entirely by the intern. Their treatment necessitates more expert care and sounder judgment than many cases of abdominal operation to which the surgeon feels called upon to administer himself.

HERNIA IN ITS RELATION TO THE COMPENSATION LAW

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The relation of our State Compensation Law to hernia is dependent upon: (1) The available evidence concerning the etiology and mechanism of hernia. (2) The interpretations of that Law by courts of appeal as influenced by unfortunate terminology and misunderstanding.

Admittedly a threadbare subject, this problem still confronts us in a troublesome fashion. It has, however, since 1922, been markedly clarified in a critical interpretation and exhaustive review of the literature by Wainwright.[1] In this survey the opinions of over one hundred surgeons experienced in the management of hernia were cited in support of the saccular theory of hernia; that is, its development from a preformed structure independent of any single strain or trauma in the vast majority of cases. This conception was reached as the result of observations on the anatomy and embryology of



Fig. 1.—Case 1. Gross appearance of hernial sac, showing region from which section was cut.

hernia, its clinical history, and its care in children by ligation of the sac. Included in this review are the careful studies presented before this society by Colcord[2] in 1918 and the sane analysis of the subject by Patterson[3] and his very urgent recommendations for modification of our present law.

With reference to the employers' liability, Wainwright suggests the following classification: (1) "Hernias by direct external violence. (2) Hernias of effort appearing suddenly as a result of alleged muscular effort. (3) Hernias of effort appearing gradually."

In only the first group would the criteria for compensation hold as postulated by Patterson; namely: "(1) The descent of the hernia immediately following the cause. (2) Severe pain in the hernial region at the time of appearance. (3) Such prostration that the employee was



FIG. 2.—Case 1. Section of sac wall, stained with hematoxylin and eosin, and magnified 250 diameters.

compelled to cease work immediately. (4) The above symptoms of such severity that the same were noticed by the claimant and communicated to the employer within twenty-four hours after the occurrence of the hernia. (5) Such physical distress that the attendance of a licensed physician was required within twenty-four hours after the occurrence of the hernia."

Contrary to the impression gained by his critics, Wainwright very clearly defines the type of hernia in which compensation is justified. On the other hand, he does not believe that the employer should be liable for a condition in which the employment represents the most recent circumstance under which the hernia appeared, comparable to "the straw that broke the camel's back," "the last stroke of the axe which fells the tree," or, as another author puts it, "the last punch in the meal ticket."

Almost simultaneous with the publication of Dr. Wainwright's study there appeared the report of the special committee of the Medical Division of the American Railroad Association, emphasizing proper compensation for true cases of traumatic hernia—which are admittedly few. They present very briefly grounds for the same conclusions, and make similar recommendations.

After the appearance of these two reviews summarizing the conclusions of observers in England, France, Germany, and America, a group of test cases were appealed on the ground that occupation was a contributory factor and the strain incurred was insufficient. Such profound students of the subject as Coley and Gibbon, among others, testified that the exertion was casual and incidental. It is difficult to recognize clearly differentiations between the cases. The two claimants who were not awarded compensation gave a history of a short period of employment, and the discomfort associated with strain was rather indefinite in its onset.

Most significant and enlightening is the memorandum drawn up by one of the members of the Board, Mr. T. Henry Walnut,[4] who makes the following deductions:

1. Compensable hernias are: (a) Traumatic—those which develop immediately or shortly following direct violence to the abdominal wall, whether this violence results in a tearing of the soft tissues, thus allowing some portion of the abdominal viscera to protrude, or is merely accompanied with definite signs of injury to soft tissues at the point where the hernia appears. These are clearly traumatic hernias, and no particular difficulty should be experienced in determining the question of their compensability. (b) Sudden hernias, or hernias of effort—those which are caused or materially aggravated by indirect application of force arising from a particular occupational strain, causing increased intra-abdominal pressure. This class covers or includes the hernias designated by Drs. Mock and Colcord as "sudden hernias" and by other writers as "hernias of effort." They present extremely difficult questions for determination,

2. Noncompensable hernias are those which are of slow development from natural causes, and which cannot be related in an appreciable degree to a particular exciting cause.

In addition, he emphasized the following



FIG. 3.—Case 1. Section of sac wall, magnified 250 diameters—connective-tissue stain used. Note some fragmentation of connective tissue.

details to be considered in determining compensability: (1) The alleged accident. (2) The effect of injury upon the employee. (3) History of preëxisting hernia. (4) Age of claimant. (5) Physical condition of employee. (6) Size of hernia. (7) General medical considerations.



Fig. 4.—Case 2. Gross appearance of hernial sac, showing region from which section was cut.

Finally, he limits the contributory cause in a compensable case to the strangulation of a preëxisting hernia. This represents a real advance, and is the first divergence from a questionable principle implied in a decision rendered by the State Supreme Court in the case of Bridget Clark vs. Lehigh Valley Coal Company. Her husband, known to have syphilis, died from a ruptured aortic aneurysm while at work inspecting an underground pipe line necessitating walking along a slight grade. The sequence of events is obscured by the absence of witnesses. There was evidence of vomiting, and the man's clothing was slightly burned. Here, the Supreme Court ruled that, wherever the occupation proved a contributory factor in any mechanical process leading to disturbances of body function, the individual so afflicted was entitled to compensation. In the development of hernias of all types, opinion has been expressed claiming the occupation to be a contributory factor. Such a principle may prove very annoying to those of us engaged in the examination of applicants for employment. Many of us, in coöperation with industry, are glad to accept the substandard worker and place him in a suitable field. The cited ruling makes us assume an unreasonable responsibility in our efforts at rehabilitation. Prognosis of disease does not seem to permit of sufficient accuracy to avoid with certainty the unexpected.

Quite apart from the broader legal aspects of this question, we have attempted to study objectively the natural history of hernia with reference to: (1) Its distribution among a large group of workmen as influenced by (a) the evidence of preëxisting weakness, and (b) the type of occupation in which hernia most frequently develops. (2) The gross variations in the inguinal structures, as made out in the living. (3) The histologic changes in the sac, with reference to evidence of damage or repair process.

Our material comes from a group of some three thousand men under our supervision for the past eight years, primarily examined by my predecessor, the late Dr. John W. Luther, in 1915, and subject to re-examination at intervals of approximately three years. This routine calls for a special note on the condition of the aponeurosis of the external oblique, the protrusion from the internal ring, the thickness of the conjoined tendon, and the size of the external ring.

The work in a metallurgical and chemical industry has been roughly classified for me into three groups: (1) Heavy—involving, until recently, the use of ponderous bar tools in the stoking of reduction furnaces where massive tough clinkers form. (2) Medium—that found in general machine and carpenter shops for maintenance, tasks necessitating the usual exertion of semiskilled labor. (3) Light—such as that found in laboratories, draughting rooms, or clerical departments.

Distribution of Men Showing "Potential Hernias"

Type of Work		*Aggravated*	*Developed Hernia*	*Total Employees*
Heavy	37	3	0— 0%	840
Medium	107	5	13—12%	1,312
Light	102	4	11—11%	1,200

246=6% of total



Fig. 5.—Case 2. Section of sac wall, stained with hematoxylin and eosin, and magnified 250 diameters.

DISTRIBUTION OF THOSE HAVING HERNIAS AT THE INITIAL EXAMINATION

Type of Work		*Operated Upon*
Heavy	1	1
Medium	28	11
Light	45	27
	74	39

Of these more than half were unaware of their hernias.

It should be added that over 90 per cent of the patients who did develop hernia showed not a



Fig. 6.—Case 2. Showing connective tissue for the most part intact.

weakness of the structures forming the canal, but a fullness of the peritoneal diaphragm overlying the internal ring. Critically speaking, it is not a weakness, but a persistance of the processus vaginalis.

In the course of these examinations we have encountered three examples of attempts at self-inflicted rupture by Europeans in order to avoid military service. This consisted solely of an enlargement of the external ring by tearing the aponeurosis with a blunt instrument. These men did not resort to snuff nor to emetics, as reported by other observers, nor did they develop hernias.

There was found one example of hernia in twins, aged 44 years, who were wiry, muscular individuals of short stature. One worked in a slate quarry as a splitter for the greater part of his life, and had a low grade of silicosis. The other worked upon a farm during his early life, and later engaged in clerking in a country store. Both developed hernia within a few months of each other. They were the indirect inguinal type, with sacs extending well down into the scrotum. Without a preëxisting anlage such remarkable parallelism does not seem probable, and the independence of occupation is very suggestive.

Another example was found in twin children, aged seven, having the testicles within the respective sacs, to which limited group the term congenital hernia has been applied. In our series of some three hundred operations for inguinal hernia there were found in over 28 per cent graded variations from this type, ranging from the cylindrical communications between the sac and the tunica vaginalis to cordlike connections and pronounced thickening of the most distal portion of the sac.

The importance of peritoneal protrusion independent of canal-wall defects in the development of hernia is further supported by the history of previous unsuccessful operations for tightening of the external ring in five of our series. This is in line with the cure of hernia largely through the obliteration of the sac by the procedure of Kocher,[5] Russel,[6] and LaRoque.[7] One gets the same impression from the gross variations in the size of the internal ring and mobility of the overlying peritoneum, as inspected or palpated at operation where the condition of the patient and the exposure permit.

The relative insignificance of the acute strains is suggested by the compression of the finger introduced into the canal through a small sac during straining of the abdominal muscles, and by the failure of second-stage labor pains to produce an aggravation of the hernia in four instances.

It should be borne in mind in connection with the frequently cited observations of Russel[9] on the treatment of hernia in children by ligation of the sac alone that Kocher cured hernia by inversion of the sac and tucking it up high underneath the aponeurosis of the external oblique. More recently G. Paul LaRoque[10] has demonstrated the efficacy of an intraperitoneal ligation of the sac without further reconstruction. Four men in our series gave a history of a preceding operation for tightening of the ring that had failed.

Only after my interest had been stimulated by the assignment of this subject have the gross variations in the inguinal region of the internal

ring been noted at operations where the exposed field and condition of the patient permitted their inspection or palpation. The size of the internal ring varies markedly, as well as the resistance of the adjacent structures. When a small sac is present, the slightest pressure is sufficient to admit the finger into the canal. Straining of the abdominal muscles tends to produce an obliteration of the canal.

Sections of the sacs have been examined with reference to a correlation of the history with the evidence of injury or repair process. Admittedly the structure of the sac alone tells but a small part of the story, and our series, subject to this study, is not large. Two examples will be presented by way of comparison.

Case 1. The man gave no evidence of preëxisting weakness. He struck the handle of a wheelbarrow, noticed a great deal of discomfort that night, was examined by me two days later, and an inguinal hernia was found for which a repair was done only five days after the alleged injury.

Case 2. The sac appeared gradually some three months before operation in a young adult working in the car shops, and gave rise to little or no pain.

There was a striking similarity in the gross appearance of the sacs and their relation to the surrounding structures. Sections were cut through the base of each sac, and again there were no pronounced differences. There was nothing to suggest in the more recent and more acute case a damage to the structures in the nature of any tearing or stretching. There were none of the cells ordinarily associated with the repair process present in the peritoneum or any other tissue. In both there was a rather surprising amount of elastic tissue which showed distinct fragmentation in the more acute hernia. The mesothelium lining the peritoneum appeared entirely normal. It seems justifiable to interpret these findings as evidence of a long-standing, preëxisting structure, gradually undergoing changes which, in the second case, developed very largely independent of the type of strain.

Summary and Conclusions

(1) There is an abundance of evidence in support of the saccular theory of hernia.

(2) The so-called contributing factors are varied and incidental.

(3) Hernia is not the picture of physical damage.

(4) The evaluation of contributory influence in claims under the Compensation Law calls for a closer coöperation between those engaged in general medicine and those responsible for the interpretation of the Law.

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THE TREATMENT OF CRANIAL TRAUMA

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As applied herein, the term cranial trauma is restricted to the effects of head injuries on the *intra*cranial contents, excluding the various injuries to the increasing structures the treatment of which requires the application of but ordinary surgical principles. Fracture, *per se,* of the bones of the skull is of comparatively little moment except that a force sufficient to fracture the skull is significant of the possibility of serious injury to the incased brain.

The subject remains an important and interesting one because of the frequency of head injury in congested and industrial districts, the multiplicity of resulting brain lesions, the alarmingly high mortality in spite of the advances in neurosurgery, and what is often lost sight of but is of even greater moment to the individual and to industry, an astounding morbidity which points an accusing finger at the inefficacy of our treatment.

The problem is one of neurology, and any effective treatment requires an essential understanding of the anatomy and physiology of the various areas of the brain, a knowledge which, sharpened and perfected by experience, becomes that much desired attribute, good judgment.

The *sine qua non* for the successful treatment of these cases is conservatism. Until quite recently, a large proportion of the patients were rushed to the hospital with the avowed intention of immediate operative interference, usually without any accurate notion of the indications therefor except that the patient had a fractured skull and was unconscious. There is no more fertile field for the unscrupulous surgeon. It is just as inexcusable to operate upon a hopelessly moribund patient as upon one who we should know will recover by less drastic measures. We find ourselves doing fewer and fewer decompression operations, except in the presence of well-established indications. The first essential is an adequate examination of the patient, carefully recorded. This gives us a graphic basis with which subsequent observations may

be compared, and changes for better or worse noted. In our cases, examination of the ocular fundi has been eliminated, as the consensus of opinion seems to be that the fundi give little or no information as a guide to treatment, at least not early enough to be of value.

The primary efforts in the treatment of head injuries should be directed toward the frequently accompanying shock. This does not differ from that of shock from any other cause, but emphatically precludes any other measures, and particularly operation, until it is successfully combated. One may then find himself confronted with one of four gross types of injury, all of which demand immediate or at least early operative interference:

(1) *Extradural hemorrhage.* This usually results from laceration of the trunk or one of the branches of the middle meningeal nerve. The symptoms are too well known to demand rehearsal. Its early recognition and immediate operation are essential. Removal of the clot and securing the bleeding point is done through a subtemporal opening. If the bleeding point cannot be recognized, ligation of the main trunk of the vessel or plugging the foramen spinosum with wax or cotton will save valuable time. The dura should always be opened, and usually left open, to allow the escape of a possible subdural hemorrhage or to relieve an increased intracranial pressure resulting from an underlying contused or lacerated cortex. Recovery in these cases following speedy diagnosis and operation is dramatic. Procrastination is fatal.

(2) *Compound fractures of the vault.* These may be complicated by lacerated dura, pial hemorrhage, macerated or lacerated brain, or indriven bone fragments or foreign bodies. Usually decompression is spontaneous, and operation is done to avoid infection. Débridement of the wound, the removal of foreign bodies and softened brain, with closure of the dura whenever possible, are indicated. Drainage should be instituted for at least twenty-four hours.

(3) *Depressed fractures of the vault.* Even in the absence of serious symptoms, operation should be done in these cases before the patient leaves the hospital, in order to avoid subsequent cortical adhesions, cystic degeneration, or merely the psychic effect of a depressed skull. The fragments should be remolded and replaced to obviate a serious cranial defect.

(4) *Localized brain injuries, with or without fracture of the overlying skull.* While these injuries may and frequently do recover spontaneously, certain of them demand a local decompression. In this connection, one should not lose sight of the possibility of a contrecoup brain injury, in which the maximum cortical damage lies opposite the site of fracture or injuring force.

There remains the much larger group of cranial injuries in which none of the foregoing factors obtain, including most fractures of the base and cases of widespread brain injury of varying degrees. It is here that routine conservative treatment is indicated. Essentially, it means knowledge and control of the increased intracranial pressure and the effects of the latter on functioning of the vital centers in the medulla. In detail, it includes isolation of the patient in a quiet and darkened room, elevation of the head, application of ice, and constant observation of the state of consciousness, type of respirations, and rapidity of the pulse. Hourly records of the pulse pressure should be made, and if this exceeds the pulse rate, a dangerous level of medullary compression impends. Control of delirium by sedatives and restraint may be necessary. The most accurate information as to the degree of intracranial pressure is obtained by a carefully performed lumbar puncture and its estimation by the spinal mercurial manometer. It may be repeated frequently, and is not only of diagnostic value, but is one of the most effective means for the control of medullary pressure. Certain precautions must, however, be observed in the employment of lumbar puncture. In the presence of a pressure in excess of 20 mm., rapid withdrawal of large amounts of fluid should be avoided. Safety demands a more frequent withdrawal of small quantities. So too, if subarachnoid hemorrhage is present with a bloody fluid, its withdrawal may result only in an acceleration of the bleeding.

The type of case under discussion may conveniently be separated into three groups, as a guide to prognosis and treatment:

Group 1. Cases of extensive and massive brain injury, with almost immediate decompensation of the medullary centers, causing death within the first few hours. These patients are obviously moribund from the start, and no amount of decompression by lumbar puncture, operation, or other means will have the slightest effect on the inevitable ending. Operation should be avoided.

Group 2. Cases in which symptoms are never alarming. Even though loss of consciousness may be persistent, signs of cortical irritation prominent, and a moderate rise in intracranial pressure present, the function of the vital centers is never seriously disturbed. Pressure is controlled by repeated lumbar puncture and in-

jection of concentrated salt solutions. Operation is nearly always avoided.

Group 3. Cases in which there is a definite and perhaps increasing rise in pressure, with manifestly serious brain injury without localizing signs—a class obviously midway of groups 1 and 2, but touching them at either extreme. Usually these cases are controlled by lumbar puncture and dehydration by concentrated salt solution, though these may fail and operative decompression become necessary. As a rule, operation should not be done within the first twenty-four hours. An uncontrollable pressure during the first day is due to widespread maceration of the brain, basilar hemorrhage or, intracerebral hemorrhage, and operation will be as futile as other measures. After the twenty-four hour period, edema of the contused brain is accountable for the rising pressure, and operation may prevent a fatal outcome.

The value of hypertonic salt solutions for the reduction of intracranial pressure seems to be well established. Magnesium sulphate by mouth and rectum, or 30-per-cent sodium chlorid or 50-per-cent glucose solution intravenously may be employed. Their action is through dehydration of the entire system. Too much must not be expected of them, and their use must be tempered by judgment and discrimination. Glucose solutions have certain advantages. They may be used in the presence of shock, they are followed by no secondary edema, as is the sodium-chlorid solution, and they may be given in quantities up to 500 c.c. without danger. Purity of the glucose used and absolute neutrality of the solution is essential.

Mention has been made of the deplorable morbidity of cranial trauma. Not a few of the problems of the industrial surgeons and the compensation courts are from this class of injured. Unfortunately, too, not all are bona fide. Some are unconsciously or deliberately malingering. Coached by professional expert witnesses in the subjective symptoms of the posttraumatic syndrome, they become doubly trying problems to the conscientious observer. This thorn in our side will probably be permanent.

I am convinced, however, that the distressing chain of disabling symptoms so often encountered is not alone due to the primary treatment, but most frequently to an unduly shortened period of convalescence. Even the mildest cases require complete mental and physical rest for at least a month. Six months to one year is none too long in the more severe cases. I am sure many of these patients would be returned as normal, active, useful members of society if this were insisted upon.

PHYSIOTHERAPY AND ITS ROLE IN REHABILITATION OF THE INJURED

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Physiotherapy is a comparatively new form of treatment in traumatic surgery, and yet it is as old as medicine itself. Massage was used by the ancient Greeks, and they developed it to a high degree of efficiency; but it fell into ill repute and disfavor when it was abused by the charlatans. It has been revived frequently during the intervening centuries by somebody, and always palmed off on the profession as something new. The latter part of the last century the Swedes developed it to a high art. But it took the World War really to demonstrate the value of physiotherapy. Its worth was definitely proved in the after care of the wounded soldier, and the war surgeons brought it back to civil life to apply to the rehabilitation of the injured in civil occupations.

For the past seven years there has been a physiotherapy department at Moses Taylor Hospital, in Scranton, in which considerable benefit has been derived from its use in the treatment of traumatic cases. The value of this treatment merits a brief review of its effects and its application to the rehabilitation of the injured. However, we must not let enthusiasm for a new idea carry us away and make us believe we have a cure-all. It is nothing more than another good drug to help in treatment of the injured, and the usual routine care of these cases must not be neglected with the expectation that physiotherapy will replace them.

The agents used in physiotherapy are electricity, water, heat, exercise, and massage.

Traumatized parts of the body have a stasis of the circulation that causes edema and pain in the affected part. Because of this edema there is sluggish muscle action, and this in turn prevents usage of the part. This disuse is followed by adhesions and atrophy. The surgeon usually treats this pathology by fixation of the part, generally in a solid plaster cast that prevents observation as well as motion. Dr. Hawley, of Bridgeport, has called attention to the fact that the soft structures of the body, especially the muscles and tendons, move with the little friction that they do because of the lubrication which nature places between the apposed surfaces of the active parts. But if a part is put at rest and kept inactive, this excellent lubricant becomes a menace, in that it turns to a gluelike substance which quickly organizes and forms fibrous bands that become permanent adhesions if the period of fixation is prolonged.

It is the purpose of physiotherapy to maintain in an injured part the normal physiology as near as possible, and in that way prevent the disability of disuse.

Electricity offers an agent that has variable effects on tissue. The galvanic current stimulates muscle contraction, and often aids in the regeneration of nerve and muscle power in a part where there was palsy following a nerve injury or disease. But the most important form of electrical treatment in physiotherapy is diathermy—which is nothing more than heat generated by a high-frequency current, and when applied to a part it penetrates the tissues so that it is distributed equally throughout the part. Thus, if applied to a knee, the heat is generated through the knee in such a manner that it is just as warm in the middle of the joint as it is on the surface. This is the only form of heat that penetrates more than the depth of a half-inch into the tissues. Because of this penetration it is very efficient as a stimulant to circulation and in relieving congestion. Electric-light cabinets and bakers stimulate circulation by heat, but it is only surface heat.

Water is used because it also stimulates circulation by reason of its variation in temperature and the massage effect it gives on striking the part in a spray formation or whirlpool bath. Exercise is effective, in that it moves the parts, prevents adhesions, maintains function, and prevents atrophy. Massage is used to rid the muscles of the fatigue waste which develops after heat and exercise, and always terminates the treatment, no matter what method may have been applied to the part.

From the foregoing, if fixation that permits frequent observation and local treatment is substituted for rigid fixation that prevents observation, the amount of lost motion, lost power, and atrophy of the part will be decreased. Further, if massage and passive motion are applied early, together with the necessary physical agents, the sluggish circulation will be stimulated and a physiologic tone maintained in the injured part until it has healed sufficiently to reassume activity. In this way the disability period will be lessened, because with rigid fixation, after the trauma has healed, time is required to restore the power and motion that were lost because of disuse; while with physiotherapy the motion and power are maintained, and when the trauma disability has terminated, only a comparatively short time is required to reëstablish normal action. Our results show a definite shortening of the disability period in cases treated with physiotherapy. This is especially true of the long bones, which were investigated in a group of about 400 cases running over a period of nearly four years—two years before and two years after the use of the apparatus. The accompanying table shows the reduction of disability time in fractures of the long bones after establishment of a physical-therapy gymnasium at Moses Taylor Hospital, Scranton, Pa. The figures given are for uncomplicated simple fractures in males over fourteen years of age. All were mine or railroad employees. This table shows a shortening in the disability time of approximately 21 per cent.

Reduction of Disability Time by Physiotherapy

	Before—No. Days Disabled	*After—No. Days Disabled*	*Saving in Days*	*Percentage of Improvement in Disability Time*
Clavicle	67	59	8	12%
Humerus	125	90	35	28%
Radius, ulna, or both	76	64	12	16%
Femur	239	180	59	25%
Tibia, fibula, or both	121	92	29	24%

No one type of physical agent is sufficient in itself; the combination of the various agents, in conjunction with the regular recognized treatment of trauma is what produces results. To be effective, diathermy, active by means of its heat penetration, must be associated with hydrotherapy and massage. To apply diathermy alone to a part simply turns out a boggy mass of tissue, and it is necessary to follow this treatment with another agent to relieve this bogginess. This applies also to other heat-producing agents such as the large therapeutic lamps and the electric bakers and cabinets.

Hydrotherapy is more effective by reason of its stimulation to the peripheral nerves than its temperature effect. This stimulation is the result of the mechanical impact against the skin of the fine spray or whirlpool bath, and added to this is the change from hot to cold and back again as a factor in stimulating the nerve reflexes. But again, it is an agent which must be used with heat and massage to obtain good results.

Exercise is the real heart of physiotherapy.

It is directed at a definite muscle group by means of special machines which are made to produce motion in that part only. There is a machine to flex the elbow, another to flex and extend the wrist, another to rotate the wrist, an abductor of the shoulder, a circumductor of the shoulder, and so on, for every movement of the skeleton. The amount of motion in the part under treatment should be measured by apparatus made for the purpose. This provides a means for gauging the progress of the case. We have a dial-like board that measures the extension and flexion of the elbow, and every patient with elbow disability measures his range of motion before and after treatment. This helps us watch his progress, but what is far more important, it shows the patient that he is progressing and the psychological effect is to stimulate his coöperation and induce more favorable results. It is remarkable how properly applied exercise will limber up what appears to be a hopelessly stiffened joint, but it must always be used in combination with heat, hydrotherapy, and massage. The heat and hydrotherapy should precede the exercise, and the massage follow it to rid the tissues of the waste materials of fatigue.

Massage should terminate all physiotherapy treatments because it relieves the soft structures of the fatigue residue and tends to stimulate growth of atrophied tissues. In early care of cases it prevents atrophy. It should be done by a trained masseur, because there is more to massage than mere rubbing of the part.

The main idea is to stimulate circulation in a part that has a lethargic circulation and to prevent disuse of the structures. Although physiotherapy does this, it must be introduced merely as an aid to the regular care of traumatic cases, and should not interfere with proper rest, fixation, and healing of the injured part. It is simply an aid in maintaining or restoring power and motion.

ABSTRACT OF DISCUSSION

Of Symposium on Industrial Surgery

Loyal A. Shoudy, M.D. (Bethlehem, Pa.): The report of the "Burn Committee" of which Dr. Ravdin is a member and the work done by Dr. Davidson, of the Ford Hospital, have served to call attention to a much-needed field.

A few points regarding first aid may be mentioned. In any industry the first dressings applied should be in line with the treatment to follow. In most cases the method of choice is to cover the burned area with sterile dressings, and send the patient to the hospital immediately. In the case of burns by strong acid or alkali the first aid should be cleansing with water, being sure to flush all the parts thoroughly. From our experience, it is inadvisable to use soda solution for acids and acid solutions for alkalis. This simply adds more heat.

In our industrial work, out of the past 365,584 accidents, 20,858 (5.7 per cent) were due to burns. The parts burned were: hands 20%, fingers 15% (a total of 35% manual burns); arms, forearms, and wrists 24%; face and head 9.5%; eyes 13.5%; body 5.5%; legs 9%; feet 3.5%. Of the 20,858 burns, 45 were fatal, 44 dying on the average of the third day, 1 living for thirty days, and 7 dying instantly. All were burned over two thirds of the body or more. The causes were steam, hot water, molten metal, powder, actual flame, hot cinders, and sulphuric acid (one case). Of the total number of cases, 129 required hospitalization. Three had only the eyes burned. The time lost averaged 32 days—face 10 days, body 34, legs 92, hands 7, and feet 18. These statistics cover a period of eleven years, and an average force of 15,000 employed men.

As only 129 of our patients required hospitalization, the ambulatory class is of considerable importance. Dressings must be painless, must be curative, and, if possible, must allow the patient to continue work. The first requisite is cleanliness, and dressings should be done daily and carefully. Because of the nature of the industry, we first cleanse practically all the burns with benzine. Then they are sponged gently with a warm solution of chinosol (1:2,000)—normal oxyquinolin sulphate (Murphy-Lusk: Bellevue *Annals of Surgery*, 1921-22. Pilcher used quinal-formal solution, alcoholic, 22). All blisters are opened carefully, the part is dried with hot air, and an ointment of bismuth, paraffin, and petrolatum applied on gauze or lint. If the burn is extensive, we cover it first with a layer of parasine gauze.

Burns from certain departments require a different treatment from the outset—as burns of the feet from hot metal. In these we cleanse, cut away dead tissue, dress with wet compresses of chinosol, and keep them moist. This is sometimes varied with a saline and chinosol dressing.

With chinosol and bismuth ointment we have cared for most of the burns in the clinic, and the results have been satisfactory. In the redressings there is no sticking, the parts being protected by parasine gauze, and the wounds heal, leaving a smooth flexible skin. If there is any tendency towards infection, or an accumulation on the burn, it may be washed with warm chinosol or chinosol and saline. In the later stages, where the area is clean and granulating, after drying with hot air we have had good results using mercurochrome (2 to 5 per cent), drying and protecting with a thin layer of bismuth ointment. The results of the hot air are most gratifying.

The bismuth ointment is composed of petrolatum 94 parts and paraffin 6 parts, and to this is added 6 per cent of bismuth subnitrate. The melting point of this ointment is above the body temperature. It makes a flexible dressing, allows free movements of the fingers, arms, etc., and permits the patient to continue on the job.

For burns of the skin around the eyes we use zinc-oxid ointment, to which paraffin is added. Probably because of the eye secretions, this is more satisfactory than the bismuth. For superficial burns of the cornea we use butesin picrate, one per cent, in the ointment form.

Wherever possible, we prefer to have the patient move around. The general condition of his health must be looked after. Sometimes, in older men, a little iron, quinin, and strychnin is needed. It is

essential that all parts possible be exercised to prevent stiffness. In burns of the hands, after the acute stage, forced movements and massage should be used.

Our experience follows that of Dr. Rebhorn in the results obtained from physiotherapy.

HUBLEY R. OWEN, M.D. (Philadelphia, Pa.): I was surprised when Dr. Ravdin spoke of deferring débridement for several days because of the shock following immediately after a burn. Did he possibly confuse this procedure with the cutting away of sloughing tissue? Débridement is extirpation of the entire infected wound at the time of its inception.

In bad burns I make it a practice to administer tetanus antitoxin, as in one case of a severe burn the patient died of tetanus in forty-eight hours.

DR. RADVIN: Years ago, in the Academy of Surgery, Dr. Ashhurst brought up the same question—what *is* débridement?

J. M. WAINWRIGHT, M.D. (Scranton, Pa.): Employers do not object to paying a man compensation for a hernia due to his work, but they do object to paying for hernias that have existed for five or six years, and to which attention has only been called by some incident on the company's property.

Several years ago some of the big employers of labor had a fight before the Compensation Board on the subject of standardizing the question of hernias and determining what ones should be compensated and what ones should not. A ruling was established by the Board which has had a very marked effect in clearing up the question. Two or three years ago, our company was paying compensation for twenty hernias, but since that time we have had only three hearings on such cases. One was decided in favor of the company, and the others are still pending. Of course, the ruling of a court does not establish a scientific fact.

GIARDIA INTESTINALIS AND OTHER INTESTINAL PARASITES IN CHILDREN*†

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Intestinal parasites and symptoms suggestive of parasitic infestation in children have been sufficiently common in pediatric practice to furnish many studies. Infestation occurs through the mouth, by soiled hands, and contaminated food.

Giardia intestinalis is of special interest because of reports claiming it to be a cause of diarrhea. Recently R. Miller, after examining twenty-three children infested with this flagellate, believed it could produce chronic enteritis. The diarrhea may be severe enough to cause loss of weight and occasionally to retard development and diminish growth. It is suggestive of a possible cause of infantilism of enteric type, even in those children who may be only "carriers."

In the routine study of diarrhea at the Children's Hospital, Philadelphia, Drs. Gittings and Waltz observed two children with severe diarrhea, with no demonstrable dietary, bacterial, or other protozoal cause, whose stools contained enormous numbers of active vegetative forms of Giardia intestinalis. As the Giardia disappeared in one case and became cystic in the other, the diarrhea subsided and the children made uneventful recoveries.

A routine study was made of the stools of children suffering from various conditions who were admitted to the wards and clinics of the Children's Hospital during the first nine months of 1926. A simple technic was adopted that could be used readily in practice. A drop of salt solution was placed upon each of two glass slides into which a portion of stool taken from the sides and center of the specimen was rubbed up into a fine emulsion. Cover glasses were placed over the emulsions, and the slides carefully studied under the low and the high powers of the microscope for fifteen to twenty minutes. Lugol's solution was used to bring ova and parasites into strong relief and to help distinguish their internal structures. When possible, two or more stools from the same child were examined. The concentration method of examination was used on a third of the stool as a check.

The stools of 304 children were studied, the results of which are shown in Table I. Giardia intestinalis was found in sixteen per cent of the children under twelve years. The youngest was nine months old. The age incidence was found to be as follows:

Age	*Number of Children*	*Percentage with Giardia in Stools*
Under 1 Year	50	2.0
1 to 2 Years	45	4.4
2 " 3 "	36	19.44
3 " 4 "	33	18.2
4 " 5 "	21	23.8
5 " 6 "	34	29.4
6 " 7 "	21	19.0
7 " 8 "	16	18.75
8 " 9 "	13	30.77
9 " 10 "	9	11.1
10 " 11 "	11	18.18
11 " 12 "	8	37.5
Summary		
Under 4 Years	164	9.75
" 6 "	219	14.15
Over 6 "	78	21.79
4 to 8 Years	92	23.9
8 " 12 "	41	24.39

Giardia or Lamblia intestinalis was first described by Lambl in 1859. It is a flagellate whose normal habitat is the upper intestinal wall. According to Boeck, it is impossible to cultivate

*Read before the Section on Pediatrics of the Medical Society of the State of Pennsylvania, October 12, 1926, at a clinic held at the Children's Hospital, Philadelphia, Pa.

†From the laboratory and services of the Children's Hospital of Philadelphia.

Table 1

Result of Stool Examinations According to Ages

Years	Sex	Under 1 Year	1–2	2–3	3–4	4–5	5–6	6–7	7–8	8–9	9–10	10–11	11–12	Over 12 Years	Times Found	Children Examined	Total
Negative	Male	24	24	21	6	4	9	8	6	6	5	5	2	4	124	124	234
Negative	Female	25	18	6	18	9	11	9	4	3	2	3	1	1	110	110	
Giardia intestinalis	Male	1	1	4	4	3	9*	2*	1*	4*	0	2	2*	1	34	34	49
Giardia intestinalis	Female	0	1	3*	2*	2	1	2	2†	0	1	0	1	0	15	15	
Entameba coli	Male	0	1	0	0	1	0	1*	2*	0	1	0	2*	1	9	6	12
Entameba coli	Female	0	0	1	1†	0	1	0	2†	0	0	1	1†	0	7	6	
Ascaris lumbricoides	Male	0	0	1	0	0	1	0	0	0	0	0	0	0	2	2	5
Ascaris lumbricoides	Female	0	0	1*	2*	1*	1	0	0	0	0	0	0	0	5	3	
Trichuris trichiura	Male	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trichuris trichiura	Female	0	0	0	0	1*	0	0	0	0	0	0	0	0	1	0	
Hymenolepis nana	Male	0	0	0	0	0	1*	0	0	1*	0	0	0	0	2	0	1
Hymenolepis nana	Female	0	0	0	2†	0	0	0	0	0	0	0	1†	0	3	1	
Oxyuris vermicularis	Male	0	0	0	0	0	1	0	1*	0	0	0	0	0	2	1	3
Oxyuris vermicularis	Female	0	0	0	0	1	0	0	1	0	0	0	0	0	2	2	
Taenia saginata	Male	0	0	0	0	0	0	0	0	0	0	0	1*	0	1	0	0
Taenia saginata	Female	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Children examined	Male	25	26	26	10	8	20	10	8	10	6	7	5	6	174	167	304
Children examined	Female	25	19	10	23	13	14	11	8	3	3	4	3	1	143	137	
Total	Both sexes	50	45	36	33	21	34	21	16	13	9	11	8	7	317	304	304

* † Found in same child.

successfully from its cysts. He found the thermal death point to be 64 degrees for five minutes. It is possible that this knowledge may be used to advantage in the treatment of adults and older children. The flagellate is found in both the vegetative and cystic stages; the former is usually found only in fresh stools. The number of cysts found varied from day to day. Porter, in a continuous observation of patients extending over a two-months' period, found that the periodicity of maximum cyst counts varied in different individuals, occurring every seven to fourteen days.

Moritz and Holzl in 1892 noted its frequency in children. Maxey studied the stools of 89 apparently normal children from the Mary Lane Home and Johns Hopkins Hospital. He found fourteen to be infested with Giardia. In examining recruits, Kofoid, Kornhauser, and Plate found between six and seven per cent to possess Giardia. Lynch reported a study of intestinal excreta of 1,040 patients with symptoms referable to the gastro-intestinal tract. Of this number, only two and three-tenths per cent had Giardia. This suggests that infestation may not always be permanent.

In England, Mathew and Smith examined the stools of 548 children in the Liverpool Royal Infirmary, and found fourteen per cent to harbor Giardia. A. H. Campbell found it in a little over sixteen per cent of 49 children in Bristol. M. M. Nutt has reported six of 25 infants under one year studied in Leeds to have possessed Giardia. There was one at three weeks, the ages of the others being respectively three months,

Table 2

Result of Microscopic Stool Examinations, January 1, 1923, to September 30, 1926

Total	1923	1924	1925	1926	Total
Children	81	70	152	304	607
Total examinations	96	105	210	498	909
Giardia intestinalis	6	12	27	49	94
Entameba coli	1	6	7	16	30
Entameba histolytiea	0	0	1	0	1
Entameba buetschlii	0	0	1	0	1
Diendamoeba fragilis	0	0	1	1	2
Chilomastix mesnili	1	0	1	0	2
Ascaris lumbricoides	1	2	1	7	11
Trichocephalus	2	1	2	1	6
Oxyuris vermicularis	1	0	0	4	5
Taenia nana (hymenolepis)	1	0	2	5	8
Taenia saginata	0	0	2	1	3
Negative	70	50	110	234	464

nine months, eleven months, and two at twelve months.

Since the beginning of 1923, stool examinations at the Children's Hospital, Philadelphia, have averaged about fifteen and one-half per cent positives for Giardia. (See Table 2.) In this study, the children were divided into two groups, white and colored. (See Tables 3 and 4.) With few exceptions, these children were residents of Philadelphia. The Giardia was found to be equally common in both groups and also among children from homes which contained household pets as well as those not having pets. Practically all the children came from districts having good water supplies. The few from questionable districts did not have Giardia.

Seventeen and seven-tenths per cent of the white children under twelve years of age showed Giardia infestation, which was present in only eleven and a quarter per cent of the colored children. There were over three times as many white children as colored. When one makes allowance for this difference in numbers, the discrepancy between the percentages of infestation in these two groups is not as large as indicated by the actual figures.

When one considers the incidence of infestation and the number of children examined in the various age groups, both the white and colored groups showed the highest incidence between the fifth and sixth years. The incidence was relatively high after the eighth year, but the small number of children studied prohibits interpretation. It is planned to continue this study among the older children.

The blood picture was not influenced by the presence of Giardia. There was no eosinophilia. The white blood count and differential pictures were unchanged. The hemoglobin and red blood cell count, as well as other blood changes, were influenced only by the condition and its sequellæ for which the children were admitted to the hospital.

The majority of the children studied were underweight, many of whom were poorly nourished. However, poor nutrition was as frequent a finding among those in whom Giardia was not found as among those possessing it.

Histories of previous attacks of gastro-enteritis, enteritis, and constipation were many. Parents who were questioned on these points always had a reasonable theory as to the cause of these upsets. "Summer complaint," dietary indiscretions, sour milk, unripe fruit, cathartics, and kindred causes were given. Among the children admitted to the hospital who had diarrhea as a complaint, or who had a history of having had diarrhea, there was sufficient clinical and laboratory evidence to substantiate diagnoses other than giardiasis. In this study no diarrhea was observed, the cause of which could be attributed in the least way to the presence of Giardia. When it was found in the stools, it did not influence the intestinal condition, nor did the Giardia decrease in numbers as the patient recovered. When these children were discharged as cured of their gastro-intestinal conditions, they still had Giardia in their intestinal tracts. Lynch, in his study of flagellate infestation, found that diarrhea occupied an inconspicuous place in his series, notwithstanding that perhaps diarrhea has been the condition longest and most commonly accredited to flagellates. It may be that a catarrhal condition of the intestines may develop at the time of invasion or immediately afterward. Chronic giardiasis may be less likely to produce diarrhea. In all probability, local and general resistance plays a deciding part.

Nervous derangements were negligible findings. That four out of five imbeciles studied should have Giardia can be satisfactorily explained by food and mouth contamination.

Abdominal pain and constipation were the most frequent complaints among the children with giardiasis. Eleven and eight-tenths per cent of the 304 children were subject to constipation. Proportionally, it was fifty per cent higher among those who had Giardia in their stools. It appeared to be corrected readily by a balanced diet and habit training.

Abdominal pain, the cause of which was not apparent at first examination, was noted in eight and two-tenths per cent. It varied from a vague sense of discomfort to actual pain, rarely severe. It usually recurred at irregular intervals, and tended to center about the umbilicus. It was almost three times more common among children with Giardia than among those in whose stools the Giardia was not found. Constipation eventually appeared to be the cause in forty per cent. It may be worth while to pursue these two points. It is suggested that repeated stool examinations be made from those with recurring abdominal pain but no pathologic condition in the abdomen, and from the constipated.

No definite symptom nor group of symptoms was observed that could be interpreted as indicating the possible presence of Giardia in the intestinal tracts of the children studied that did not occur more frequently and from readily recognizable causes in children whose stools did not contain Giardia. Race and color showed no influence on the blood picture, nutrition, and symptoms of those with giardiasis. The white and colored groups showed a sex variation. In

Table 3

Result of Stool Examinations of White Children, According to Ages

Years	Sex	Under 1 Year	1–2	2–3	3–4	4–5	5–6	6–7	7–8	8–9	9–10	10–11	11–12	Over 12 Years	Times Found	Children Examined	Total
Negative	Male	18	17	14	5	2	6	8	4	5	2	5	2	4	92	92	176
Negative	Female	16	16	5	14	7	8	8	4	2	0	2	1	1	84	84	
Giardia intestinalis	Male	1	1	4	3	3	6*	1*	1*	4*	0	2	2*	0	28	28	40
Giardia intestinalis	Female	0	1	2	1	2	1	2	2†	0	1	0	0	0	12	12	
Entameba coli	Male	0	1	0	0	0	0	1*	2*	0	1	0	1*	0	6	3	9
Entameba coli	Female	0	0	1	1*	0	1	0	2†	0	0	1	1†	0	7	6	
Ascaris lumbricoides	Male	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	2
Ascaris lumbricoides	Female	0	0	0	0	1*	0	0	0	0	0	0	0	0	1	1	
Trichuris trichiura	Male	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trichuris trichiura	Female	0	0	0	0	1*	0	0	0	0	0	0	0	0	1	0	
Hymenolepis nana	Male	0	0	0	0	0	1*	0	0	1*	0	0	0	0	2	0	1
Hymenolepis nana	Female	0	0	0	2*	0	0	0	0	0	0	0	1†	0	3	1	
Oxyuris vermicularis	Male	0	0	0	0	0	1	0	1*	0	0	0	0	0	2	1	3
Oxyuris vermicularis	Female	0	0	0	0	1	0	0	1	0	0	0	0	0	2	2	
Taenia saginata	Male	0	0	0	0	0	0	0	0	0	0	0	1*	0	1	0	0
Taenia saginata	Female	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Children examined	Male	19	19	19	8	5	13	9	6	9	3	7	4	4	132	125	231
Children examined	Female	16	17	8	17	11	10	10	8	2	1	3	2	1	110	106	
Total	Both sexes	35	36	27	25	16	23	19	14	11	4	10	6	5	242	231	231

* † Found in same child.

Table 4

Result of Stool Examinations of Colored Children, According to Ages

Years	Sex	Under 1 Year	1–2	2–3	3–4	4–5	5–6	6–7	7–8	8–9	9–10	10–11	11–12	Over 12 Years	Times Found	Children Examined	Total
Negative	Male	6	7	7	1	2	3	0	2	1	3	0	0	0	32	32	58
Negative	Female	9	2	1	4†	2	3	1	0	1	2	1	0	0	26	26	
Giardia intestinalis	Male	0	0	0	1	0	3	1	0	0	0	0	0	1	6	6	9
Giardia intestinalis	Female	0	0	1*	1*	0	0	0	0	0	0	0	1	0	3	3	
Entameba coli	Male	0	0	0	0	1	0	0	0	0	0	0	1	1	3	3	3
Entameba coli	Female	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ascaris lumbricoides	Male	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1	3
Ascaris lumbricoides	Female	0	0	1*	2*	0	1	0	0	0	0	0	0	0	4	2	
Hymenolepis nana	Male	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hymenolepis nana	Female	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Children examined	Male	6	7	7	2	3	7	1	2	1	3	0	1	2	42	42	73
Children examined	Female	9	2	2	6	2	4	1	0	1	2	1	1	0	33	31	
Total	Both sexes	15	9	9	8	5	11	2	2	2	5	1	2	2	75	73	73

* Found in same child. † One yellow child.

both groups, Giardia was twice as common among the boys as among the girls.

In this study, Giardia intestinalis was the intestinal parasite most frequently found. (See Table 5.) Entameba coli and Ascaris lumbricoides were the next frequent, in the order named. Cases of multiple infestation were not uncommon, as shown in Table 6.

The round worm was found seven times in children between the ages of two and six years.

Table 5

Infestation in 304 Children

Giardia intestinalis	16.1 per cent
Entameba coli	5.26 "
Ascaris lumbricoides	2.3 "
Hymenolepis nana	1.6 "
Oxyuris vermicularis	1.3 "
Trichuris trichiura	0.3 "
Tænia saginata	0.3 "

It was more common in the colored group and among girls. The dwarf tapeworm was found in five white children, none being found in the colored. In all but one of these children there were multiple infestations. The thread worm was found in only four white children and not in the colored group. Though infestation with Giardia may occur in the first year, it is during the second year that it usually begins, increasing rapidly to the third year, when it approaches the maximum. This high level appears to be held until the tenth year, when it tends to decline slightly.

As the simple technic used in this study was devised to stimulate the interest of physicians in intestinal parasites, the incidence of infestation would be higher with a more exact technic than that recorded in this study.

Treatment

The successful treatment of Giardia in children is confronted by four obstacles: First, the diagnosis must be made by the exclusion of all other factors capable of causing gastro-intestinal disturbances and associated conditions. Second, there is no specific treatment for Giardia that is applicable for all ages. Third, observation and treatment must be extended over a period of months, maybe years. Fourth, once the flagellate gets into the gall bladder, it is difficult to remove. Passing a duodenal tube in a child is not a simple procedure, and when under seven years, as were many of our children, it is not warranted at the present stage of our knowledge and technic.

In our hands little progress has been made in freeing the children of Giardia. Mercurochrome 220-soluble, as recommended by Dr. George A. Gray of San Jose, Calif., is being tried. Treatment was begun with one-sixth of a grain in salol-coated pills at night for three nights. At the end of this time, if there be no evidence of mercury sensitiveness, the dose is increased to three times a day after meals for a child of two to four years of age. According to Gray, sufficient mercurochrome must be given to produce mahogany-colored stools. With this objective in mind, the dosage is increased up to one-third or one-half grain after meals. The urine of the few children on whom this drug has been tried

Table 6

Cases of Multiple Infestation

Giardia, Ameba coli and Oxyuris vermicularis	1
Giardia, Ameba coli and Tænia saginata	1
Giardia and Ameba coli	2
Giardia and Hymenolepis nana	2
Giardia and Ascaris lumbricoides	2
Ameba coli and Hymenolepis nana	2
Ascaris lumbricoides and Trichuris trichiura	1

remained negative while they were under treatment.

Calomel in large doses has given satisfactory results, but only temporarily. The same is true of saline purgatives. Dr. Frank Smithies, of Chicago, has had good results in freeing adults of Giardia by giving five to fifteen grains of calomel in the evening followed by a saline purgative the next morning, after several days' starvation. This treatment is repeated three times at five-day intervals. Patients who are persistent in retaining Giardia are given a dose of calomel every two to three weeks for a year. When they are unusually resistant to treatment, he has had success with properly controlled doses of thymol, sixty to ninety grains being given, followed in six hours by a saline purgative.

Creosote in doses of four to six grains, three times a day, had no effect on Giardia in three- to five-year-old children. Arsphenamin gave promising results for a time in several instances, only to have the Giardia return in the stools six to twelve months later. Neoarsphenamin had no effect on Giardia in two children. Arsphenamin and neoarsphenamin were administered in dosage according to age and weight. The children receiving this drug were under specific treatment.

Yatren-105 had no influence on the daily cyst counts. One child gave her highest cyst count after she had been on this drug for some days. Ipecac likewise failed to limit the presence of Giardia in the stools.

With the exception of the salines and arsenic preparations, drug administration was followed by a marked cyst increase in the stools.

Cestodes and Nematodes

Children harboring these parasites may present at times a capricious appetite, various and vague abdominal symptoms, coliclike attacks,

and vomiting. Sometimes there may be annoying sensations in the abdomen or chest. Occasional nervous derangements, even convulsions, may occur in the host. Some may show a distinct eosinophilia. The children in this study who had cestodes or nematodes or both, with the exception of the round worm and the thread worm, did not give suggestive symptoms when in good health other than their infestation. The first evidence of infestation was had usually when a worm or part of one was passed in the stool or coughed up or vomited. The thread worm is frequently the cause of anal pruritus, and sometimes produces genital irritation with its ensuing symptoms. The worm is more easy to find on the skin and folds about the anus or on the outer surface of the stool. The eggs were not found in any of our cases.

The well-tried and standard treatments for these worms proved efficacious when treated in the hospital. With outpatients, it is difficult to undertake treatment and continue observation to be certain of a cure. Where absolute coöperation cannot be secured for home treatment, it is safest and most satisfactory to have the child admitted to the hospital.

Summary

Giardia intestinalis is the most common intestinal parasite in children. It was found in a little over sixteen per cent of children studied. It was more frequent among the white children.

The highest incidence was between the fifth and sixth years. It was relatively high after the eighth year. It was twice as common among boys as among girls.

No definite symptoms nor group of symptoms were observed that could be interpreted as indicating the possible presence of Giardia in the intestinal tracts of the children studied that did not occur more frequently and from readily recognizable causes in children whose stools did not contain Giardia.

Proportionally, constipation and mild abdominal pain were more common in those children who were infested with Giardia.

Giardiasis was not accompanied by eosinophilia.

Race and color had no influence upon the blood pictures, symptoms, and nutrition of those with giardiasis.

Multiple infestation was not uncommon.

The round worm was found more frequently among the colored group and among girls.

The dwarf tapeworm was found five times in the white children and not in any of the colored children studied.

Various drugs were used in the treatment of giardiasis in a limited number of children without any encouraging result.

Though most children who harbor Giardia intestinalis are only "carriers" apparently, under favorable conditions this flagellate may become pathogenic.

The standard treatment for cestodes and nematodes is most efficacious when the hosts are hospitalized.

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ABSTRACT OF DISCUSSION

Arthur D. Waltz, M.D. (Philadelphia, Pa.): In this study we found that the incidence of parasites in negro and white children in the hospital was about the same. However, many of our white patients are living under practically the same conditions and in the same neighborhoods as the negro children, and for that reason probably would show little difference. One of the rarer parasites, Dientamœba fragilis, was found in the child of a physician. Probably it is more common than is generally supposed, for the organism disintegrates rapidly, not lasting more than ten or twelve hours in the stool and not encysting as the other ameba do, so that studies of it must be made fairly rapidly. It was not long after we found the first case that we discovered three others. The finding of four cases when only twenty-eight had previously been reported seems to indicate that they are more common than generally suspected.

This organism is generally considered nonpathogenic, but we had one case in which we felt it was definitely pathogenic. In that case, however, the same symptoms are still present, though we have not been able to find the parasite for some time, so it seems that possibly the symptoms were produced by something else.

Ernest L. Noone, M.D. (Philadelphia, Pa.): This study, we believe, will be of value in establishing the frequency of giardiasis. The significance of the infestation is still problematical. Until it is determined that Giardia do or do not cause symptoms, such a therapeutic procedure as the introduction into the duodenum of various solutions is open to question. Nothing in this study has proved that the parasite causes symptoms; neither has it been proved that it does not. It carries with it no definite, characteristic complex. The symptoms sought for were vague and could be attributed to a variety of causes. Abdominal pain? Palpable mesenteric glands in some cases suggested that tabes mesentcrica might be the underlying cause. Malnutrition? Was the child malnourished because of the infestation, or was he infested because he was malnourished? Other symptoms found—perhaps anemia, perhaps alternating diarrhea and constipation—were all conditions that could have been the result of innumerable diseases of childhood.

ANEMIAS OF CHILDHOOD*†

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A knowledge of the origin and development of the blood is essential to any adequate discussion of the anemias of childhood. Sabin's excellent work on living blood cells, which is summarized below, has clarified this abstruse field. The cardiovascular system has its origin in the mesoderm, where at first primitive connective tissue or mesenchyme cells appear, some of which become differentiated into embryonic vascular tissue, the angioblast. This tissue lies outside the embryo proper in the amnion and the chorion, and in the area vasculosa of the yolk sac. Its cells coalesce to form blood islands here and there, which soon join with adjacent islands in the formation of bands of cells. In the center of these cell masses solution begins, some cells dissolving to form the original blood plasma, and others floating free as the primitive red blood cells. The periphery of the cell mass persists as endothelium, which forms the wall of the original blood vessel and remains active in erythropoiesis. In a similar manner, within the body of the embryo the heart and blood vessels are developing, but without simultaneous red-cell production, and by the third week join the extra-embryonic vessels to form the circulatory system. The nutrition which thus far has been obtained from the mother by diffusion from cell to cell now is carried directly through the placental circulation. At first the blood vessels contain only primitive red cells. The white cells migrate in from the tissue spaces much later.

There are several steps in the transition from the endothelial cell to the red blood cell, the first of which is its development into the megaloblast. Certain of the vascular endothelial cells which assume an erythropoietic function divide and form a mass of cells projecting into the lumen of the blood vessel. The first trace of hemoglobin appears in these cells before they break loose from the endothelium as megaloblasts—cells containing large pale nuclei with one or two nucleoli, a very fine network of chromatin, and a small amount of homogeneous, nongranular, intensely basophilic cytoplasm with large diffuse mitochondria. This is the predominant cell in circulation in the embryo of 1 cm. or less. The erythropoietic function at first is vested in the endothelium lying outside the body of the embryo, but later, when the liver and the spleen develop, both of which contain large amounts of endothelium, it is taken over by these organs. Megaloblast formation continues actively in the liver of the embryo up to 4 cm. The megaloblast phase, however, is transient, since the cells divide rapidly and assume new characteristics, becoming erythroblasts. The erythroblast is smaller than the megaloblast, has a deep chromatophilic nucleus without nucleoli, and a larger amount of deep red hemoglobinophilic cytoplasm with mitochondria grouped about the nucleus. The erythroblast is the predominant cell of the embryo up to 10 cm., or three months, at which time the bone marrow first appears; but it, too, is in rapid division in the formation of normoblasts—cells containing small pyknotic nuclei and red hemoglobinophilic cytoplasm with no mitochondria. The normoblast, no longer capable of mitosis, soon extrudes its nucleus and assumes the form of a biconcave disk, finally becoming an erythrocyte. Erythrocytes are present in very small numbers during the first month of the embryo, but they are the predominant cells after the third month.

Hyperchromatic cells containing an excess amount of hemoglobin are characteristic of the embryonic stage before the establishment of the placental circulation, and serve to carry the maternal oxygen by diffusion to the body cells of the embryo. The presence simultaneously of basophilic cytoplasm and of small amounts of hemoglobin in a cell results in polychromatophilia or basophilia, which may be either diffuse or punctate. Irregularities in the loss of the nucleus occur in some normoblasts with the persistence of nuclear fragments, as Howell-Jolly bodies, or of nuclear membranes, as Cabot rings. The reticulation of red cells is caused by the stringing together of their mitochondria, and is an index of their youth and activity.

Although the bone marrow appears at the third month, the liver is the organ most active in blood formation up to the sixth month. In the bone marrow some of the mesenchyme cells group together to form the angioblast, which passes through the stages outlined above in the formation of erythrocytes. After the sixth month, marrow activity increases greatly, until after birth the marrow functions almost alone in blood formation. Much endothelium lies quiescent in bone marrow, assuming an erythropoietic function only when called upon. Blood islands then are formed in a quiescent, closed portion of the vascular system, which can open and deliver its mature cells to the circulation as needed. Normally after birth only erythrocytes are present in the circulating blood, about one-

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thirtieth of the total number being destroyed daily by the spleen and replaced by the bone marrow. The life duration of the individual cell is estimated at from three to four weeks. However, if other stimuli occur and the demand becomes urgent, unripe cells may be swept out into the circulation, such as normoblasts, or in more severe cases, megaloblasts. The normablast is the cell usually found in greatest number in normal marrow, since the megaloblast and the erythroblast phases are so transient in the process of development. The usual stimulus to increased marrow activity is low oxygen or high carbon-dioxid tension, causing dilatation of the marrow sinusoids (hyperplastic appearance) with slowing of the blood stream, thus favoring more rapid egress of marrow cells to the periphery and more rapid multiplication in the cell islands. Depletion of the bone marrow may be produced experimentally by starvation or by inoculation with cultures of the typhoid bacillus, under which conditions these changes can be followed step by step during the regeneration of the marrow.

White blood cells appear much later than red blood cells in the embryo, since there is an earlier need for oxygen carriers than for infection fighters. They develop extravascularly from that form of mesenchyme cell known as the reticular cell, which occurs everywhere in diffuse connective tissue, in the framework of all organs, and later especially in the bone marrow. Recticular cells in both the embryo and the adult are branching cells offering support to surrounding tissues, undifferentiated cells with large oval nuclei, and slightly basophilic cytoplasm without granules or mitochondria, lying solely outside the blood vessels. When stimulated to white-cell production, mitosis occurs with the development of daughter cells containing large nuclei and very little, deeply basophilic cytoplasm with a few mitochondria. This is the primitive white cell from which all other forms descend. In this way extravascular cell islands are formed, some of which produce granulocytes (granular leukocytes), some lymphocytes, and some monocytes (large mononuclears and transitionals), depending on the environment and on the needs of the organism at a given time. These cells pass between the endothelial cells lining the vessels, and are swept away in the circulating blood. Granulocyte formation is most active in the liver and spleen until after the third month, when this function is assumed gradually, and after birth almost entirely, by the bone marrow.

The first step in the formation of the granulocyte from the primitive white cell is the appearance of the myeloblast, with its large oval nucleus containing a coarse chromatin network and one or more nucleoli, with its deeply basophilic cytoplasm containing many small mitochondria. The myeloblast is rarely ever seen in normal marrow, but becomes at once the myelocyte. In this cell the number of mitochondria decreases and the cytoplasmic granules appear. The myelocyte is the predominant cell in normal marrow, but is found rarely in the blood stream. The nucleus now becomes irregular and lobulated, and loses its mitotic power. The cell acquires active ameboid movement and phagocytic properties, and loses its mitochondria, becoming the mature granulocytic leukocyte. The number of mitochondria, then, is directly proportional to the generative activity of the cell. These stages in the development of white blood cells all may be followed in the experimentally depleted marrow, or may be seen in pathologically depleted marrow in which only fatty, reticular, and endothelial cells persist.

The favorite points of lymphocyte production are the spleen and the lymph nodes. Here the primitive white cell becomes the larger lymphoblast and it in turn the smaller lymphocyte. These, together with the reticular cells, form ninety per cent of the cells present in a lymph node, the other ten per cent being clasmatocytes, myelocytes, and neutrophilic leukocytes. The monoblasts and the monocytes are formed from the primitive white cells in the spleen, with the development of an eccentric, indented nucleus, and an increase in the amount of cytoplasm and the number of mitochondria. The large lymphocyte and the monocyte may undergo mitosis in the circulating blood. Megakaryocytes are large active cells wandering about in the connective-tissue spaces, and giving origin to the blood platelets by the insertion of their pseudopodia between the endothelial cells of the blood vessels. Fragments of these cells are washed away in the lumen as platelets, without their actually passing through the walls of the blood vessels.

The blood picture of the newborn child differs in certain respects from that of the child of one month. At birth the red-corpuscle count is 5,500,000 to 6,000,000 per cubic millimeter of blood, and the hemoglobin content is 130 to 140 per cent of normal. More accuracy is desirable in the estimation of hemoglobin, since there is no universal agreement as to the meaning of 100 per cent of hemoglobin. Williamson's spectrophotometric method of hemoglobin estimation, which measures grams of hemoglobin per hundred cubic centimeters of blood, appears to be the one quantitative method available, according to which 16.92 gms. is taken as the average adult 100-per-cent reading. By this method the

figure for the newborn is 23.25 gms. Moreover, there is a uniform difference between the readings in peripheral capillary blood and in longitudinal sinus blood, as the former always gives higher readings. Thus the red-corpuscle count of sinus blood averages 3,960,000 and the hemoglobin 112 per cent. The white-corpuscle count at birth also is high (20,000), of which 75 per cent are polymorphonuclear leukocytes, approximately the same percentage as is present in the maternal blood. The relatively high figures for the red corpuscles and hemoglobin are assumed to be caused by concentration of the body fluids present at birth. Although the majority of the red corpuscles present the adult appearance, a few are nucleated and a few are basophilic. An occasional myelocyte also may appear. During the first few days of life all fetal forms disappear, and at one month the red-corpuscle count has fallen to 5,000,000, the hemoglobin to 50 or 60 per cent, and the white-corpuscle count to 12,000, of which only 30 to 40 per cent are polymorphonuclears, whereas 50 to 60 per cent are lymphocytes. At one year the red corpuscles average 4,500,000, the hemoglobin is 70 per cent, and the white corpuscles 10,000, figures which approximate more closely those of the adult. The lymphocytes, however, remain at above 50 per cent until the sixth year.

The blood of early life is characterized by its instability and the ease with which it may revert to its fetal or even to its embryonic condition, with the appearance of more primitive blood cells in the peripheral circulation. Normally, after birth the bone marrow is the organ of blood formation, but under the increasing hematopoietic demands of an anemia, the liver, the spleen, or almost any focus of reticulo-endothelial tissue may be called into activity. The more severe the anemia, the greater the extent of reversion, so that myeloblasts, myelocytes, megaloblasts, and normoblasts may be swept off into the peripheral circulation. This increased activity in the bone marrow causes the yellow fatty marrow to become red and cellular, as it had been in fetal life. These changes are brought about by the resumption of hematopoietic activity by the dormant reticular and endothelial tissue present in the fatty marrow.

Anemia means any reduction in the hemoglobin content of the blood, with consequent impairment of its oxygen-carrying power. It may be caused by inadequate blood formation or by excessive blood destruction, thus upsetting the equilibrium which normally exists between the two. Less frequently it is caused by mechanical loss of blood. Anemias are common in children, but often they are associated with different etiologic factors than in adults. A simple classification of the anemias based on their order of frequency would be: (1) nutritional, (2) infectious, (3) toxic, and (4) primary.

Nutritional anemias include food anemias and the anemias of rickets and of chronic gastro-intestinal indigestion. Food anemia rarely develops during the first six months of life because of the ample supply of iron laid down in the liver during the last months of intra-uterine life. At least five times as much iron is present in the liver of the newborn animal as in that of the adult. However, this supply is depleted by the ninth to the twelfth month. Among premature infants where connections are severed before the iron is deposited and among twins where the supply must be divided, not always equally, anemia is more apt to appear during the first year. When milk alone is continued in the diet of the second year and no ferruginous foods are added, a secondary anemia develops with great regularity because the iron supply has been used up and an entirely inadequate amount is available in the milk. The anemia may become extreme, as in the case of a child of eleven months on our ward at present with a hemoglobin of 15 per cent, usually taking only the bottle, and rejecting any other form of food offered. Less striking degrees of anemia are seen more often in the children of the lower classes who live in dirt, get little fresh air or sunshine, receive an inadequate diet which they cannot masticate properly because of carious teeth, and often have infected tonsils and adenoids. Such a combination of circumstances is conducive to malnutrition and usually to some degree of secondary anemia. This is one of the most frequent syndromes encountered in dispensary work.

Another nutritional disorder, rickets, especially in the severer forms, is accompanied almost invariably by some degree of anemia. There is no associated leukocytosis except in the presence of a secondary infection. An advanced form of this secondary anemia of rickets is the so-called von Jaksch anemia, considered by many a distinct clinical entity. It is characterized by a severe secondary anemia with pronounced regenerative blood changes and a moderate leukocytosis, and by a greatly enlarged spleen. Often the liver and the lymph nodes are also enlarged. It occurs during the second half of the first year, and usually is accompanied by rickets. In his original article von Jaksch states that although rickets may be of some etiologic significance, this syndrome does occur in nonrachitic children. He states also that the prognosis is good. In one case which occurred on our ward and was fatal at nine months, delivery had been premature,

with a birth weight of four pounds. The child had been fed on milk mixtures of good quality and on semisolid foods since the age of six months, at which time a greatly enlarged liver and spleen had been observed, together with marked rachitic changes.

Another large group of anemias is caused by the acute infections, of which acute rheumatic fever and croupous pneumonia, especially when complicated by delayed resolution or empyema, are most conspicuous. In the cases which recover, the anemia and the associated splenomegaly are transitory, which Buckman explains as a temporary withdrawal into the spleen of a large number of the peripheral red corpuscles during the height of the infection, resulting in an acute splenic tumor. The most severe anemias develop in those cases in which rheumatic fever has attacked the heart, whether as a pure myocarditis without valvular involvement or as a subacute bacterial endocarditis. In one instance of the former there was a hemoglobin of 40 per cent, and in one of the latter of 35 per cent. Less frequently anemia may develop as a result of other infections, bacterial or parasitic, such as diphtheria, tuberculosis, syphilis, malaria, and intestinal parasitosis. To this group belongs acute nephritis because of the close association with acute streptococcic sore throat. In one case with anasarca and hematuria the hemoglobin fell in three weeks from normal to 10 per cent.

Toxic anemia secondary to plumbism or to malignancy also occurs at times. The lead poisoning is usually the result of the gnawing of paint from the crib or the toys, such is the perversion of appetite in some children. The anemia may be profound, but the association with other symptoms and signs of lead poisoning makes the diagnosis clear. The toxemia of malignant disease usually sets up an anemia. The most common forms of malignant tumor in early life are retroperitoneal sarcoma and tumors of the adrenal and kidney classed as hypernephroma or neuroblastoma.

The various primary diseases of the blood-forming organs naturally are associated with an anemia of greater or less severity, among which are leukemia, Hodgkin's disease, splenic anemia, hemolytic jaundice, hemophilia, the purpuras, pernicious anemia, aplastic anemia, and Gaucher's disease. Another member has been added to this group during the last few years—sickle-cell anemia, described first in 1910. Its not infrequent occurrence warrants a more widespread recognition than at present obtains. It is found solely in the negro and the mulatto, and is inherited in accordance with the Mendelian law as a dominant factor, transmitted by and developing in both males and females. Except for the marked pallor and at times the jaundice, the other symptoms are vague: sharp epigastric pains, muscle pains or stiffness, slight intermittent fever, and the occasional development of leg ulcers having the appearance of those of syphilis. Sickle cells are red blood corpuscles which have assumed the shape of sickles or crescents, from either end of which taper off long filamentous processes. A few sickle cells may be present in the circulating blood in advanced cases and can be recognized in the freshly prepared unstained smears. As a rule, however, the sickle cells may escape notice during the ordinary examination, unless the coverslip is rimmed with vaseline to prevent drying, and is allowed to stand for six to twenty-four hours. Under these circumstances many, if not all, of the red blood corpuscles will be found in the sickle form. The cause of this weakening and destruction of the red corpuscles which results in the anemia is unknown. There are marked signs of erythrocytic regeneration and a definite leukocytosis of 10,000 or 20,000. There are many remissions and relapses, with a good prognosis in the mild cases but a bad one in the more severe cases, because of the susceptibility to intercurrent infection. Undoubtedly, cases of this type have been diagnosed in former years as pernicious anemia, one instance of which is in our ward at present. The child, now six years old, when seen in another hospital at the age of eighteen months was classed among the pernicious anemias.

Any treatment of anemia must aim to increase the hemoglobin content of the blood. Transfusion is the surest and quickest means of effecting this end, as it not only increases mechanically the amount of hemoglobin in circulation, but it also stimulates the bone marrow to new blood formation, as evidenced by the appearance of normoblasts and other young forms in the peripheral blood. A most striking illustration of this is the case of a six-year-old boy admitted to the ward in May of 1926 with lymphatic leukemia. He was growing rapidly worse, the red count was 444,000, the hemoglobin less than 10 per cent, and he looked moribund; but after a single intravenous transfusion of 325 c.c. of citrated blood he rallied. Four weeks later the red count was 2,840,000, the hemoglobin 60 per cent, and the child was playing actively about the ward.

In children, in addition to the intravenous method of transfusion, there is available the intraperitoneal method, slower but quite efficacious in the end result. The absorption of the fluid portion of the citrated blood is rapid, but the passage of the cellular elements through the

peritoneum into the subperitoneal blood vessels requires a week or more. In the case of food anemia mentioned above, six days after an intraperitoneal transfusion the hemoglobin had risen from 15 per cent to 40 per cent and the red count from 1,700,000 to 2,900,000. This method is best reserved for children under two years of age in whom suitable veins are not available for the intravenous route, and in whom an immediate result is not essential. Furthermore, it avoids the occasional reaction which follows intravenous transfusion.

General hygienic measures, of course, are fundamental in the treatment of anemias, among which light and food may be emphasized. The stimulating effect of the ultraviolet rays on metabolism, especially on that of the bone marrow, is well recognized, so that intensive exposure to sunlight or to the rays of the mercury-vapor lamp should be of definite assistance in the course of therapy. There has been much discussion of the value of iron in the treatment of anemias. Experimental feeding of inorganic iron to animals, in whom anemia has been produced by iron-free diets or by bleeding, has produced no amelioration of the anemia, results which unjustly have been applied to man. Clinical experience, however, strongly affirms the value of the judicious use of both organic and inorganic forms of iron. The two forms together are of greater benefit than either one alone, for hemoglobin is composed of two parts; an organic element, globin, and an inorganic element, hematin, both of which must be available for the proper synthesis of hemoglobin. Hart, Steenbock, and Elvehjem have shown that dietary anemia in rabbits cannot be cured by the giving of inorganic iron alone, but responds readily to its combination with an iron-free, alcoholic extract of cabbage which supplies the globin element. The leafy green vegetables, eggs, and meat are the three foods of greatest iron content, and hence are most to be relied upon in the prophylaxis and the treatment of anemias. Response to simple dietary iron is slow, whereas the addition of inorganic iron, except during an infection, hastens and completes the result. It seems best to use large doses of iron to get the maximum effect, such as the 30 to 60 gr. daily of saccharated ferrous carbonate recommended by Bass and Denzer. If any specific cause for the anemia is present, it must be removed or be treated specifically.

Summary

1. According to Sabin's work on living blood cells, the erythrocytes develop intravascularly from the mesenchyme cells which constitute the blood islands and later line the walls of the blood vessels. Much later the leukocytes arise from a common stem cell lying outside the blood vessels in the reticular tissue, differentiate into granulocytes, lymphocytes, and monocytes, and pass through the vessel walls into the blood stream. At first, most blood formation occurs in the liver and spleen, but later in the bone marrow.

2. In anemias, especially the anemias of childhood, there is a reversion of the blood picture to the embryonic state, the degree of reversion being directly proportional to the severity of the anemia. In the most acute cases megaloblasts and myeloblasts appear. The following points in erythrocytes indicate immaturity: retention of nucleus, large cell diameter, hyperchromatic appearance, presence of deeply basophilic cytoplasm with stippling and reticulation.

3. The variations in erythrocyte and leukocyte counts and in hemoglobin estimations from birth to adolescence are discussed.

4. The most common causes of anemia in childhood are (1) the withholding of iron-containing foods during the second year, (2) lack of hygienic environment and adequate food, and (3) pyogenic infections.

5. Discussion of von Jaksch anemia and sickle-cell anemia is raised in particular. The latter was not recognized formerly as such, but often was diagnosed pernicious anemia.

6. Transfusion is the best treatment, intravenous when possible, intraperitoneal otherwise. Careful supervision of hygiene and a maximum of sunlight are essential. A combination of organic with inorganic iron therapy gives the best results.

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ABSTRACT OF DISCUSSION

J. Claxton Gittings, M.D. (Philadelphia, Pa.): The wonderful benefits that have come from blood transfusions and also the results of splenectomy have stimulated interest in the subject of anemia. In two of the cases mentioned in this paper the spleen has recently been removed—one a case of von Jaksch's anemia and the other of sickle-cell anemia. The spleen was removed in the former because it was gradually enlarging without any improvement in the anemia in spite of transfusions and other treatments. The spleen was movable and easy to remove. Although it is generally believed that splenectomy is not justified in von Jaksch's anemia, yet the prospects of this particular child in his home environment looked so bad that the operation seemed justifiable.

We were stimulated to this decision by the case of a girl eighteen years old whose spleen Dr. George P. Müller recently removed. At two years of age this girl had had a definite von Jaksch's anemia with splenomegaly. For sixteen years she was anemic, in comparatively poor health, and much incommoded by the splenic tumor. The year before operation she began to develop jaundice. It is too soon to evaluate results, but in the three months since operation she certainly has shown improvement.

In the case of sickle-cell anemia, the spleen was removed because the child had shown no improvement after a year's observation, most of which time was spent in the University hospital. We know comparatively little as yet about the cause of sickle-cell anemia, and in fact we do not know whether it should be classified as a separate entity at all; but as this child also had a moderate enlargement of his spleen, with no evidence of adhesions, it seemed justifiable to try the effect of splenectomy. We shall watch the further course of his case with a great deal of interest.

A. G. Mitchell, M.D. (Cincinnati, Ohio): We are inclined to forget that anemia is a common accompaniment of certain nutritional states and to become so interested in treatment of the nutritional condition that we forget the secondary anemia. We could do more for such patients if both conditions were considered.

Dr. Cooley, of Detroit, found sickle cells in a very large number of negro children who had no symptoms of anemia. The cells were discovered on routine examinations. They showed mostly the latent type of sickling in which the change in the cells did not appear until the slides were preserved in the moist condition for several hours. Dr. Cooley also found that by preserving these slides long enough, the cells would return to normal. Dr. Gittings's case in which splenectomy was performed may throw some light on the etiology of the condition.

Transfusion ought not to be delayed until it is so obviously indicated as is usual. Smaller and more frequent transfusions probably will help more than a single large one. Of course, in the hemorrhagic conditions the loss must be replaced as quickly as possible, but in nutritional states the stimulation of the small frequent transfusions does something more than mere replacement. The intraperitoneal transfusion does less than intravenous transfusion in any condition in which blood is really needed. It has a very definite function, but in cases of marked malnutrition absorption is too slow, and intravenous injections of blood are preferable. We have seen about ten cases in which at necropsy, performed in one to six days after intraperitoneal transfusion, blood was still demonstrable in the peritoneal cavity.

DEMONSTRATION AND DISCUSSION OF SOME METHODS OF INFANT FEEDING AND OF FOOD PREPARATION*

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It was suggested by our chairman that it might be of interest to discuss some of the special methods of feeding infants, and, so far as possible, to have the food prepared before you—not ordinary milk mixtures, but those requiring special procedures. This plan struck me as being certainly a very valuable suggestion, since a great many physicians, and I include myself in this category, are more or less familiar with the prescribing of certain of these foods, but lack the detailed personal knowledge which would enable them to prepare them themselves or to tell mothers or nurses just how to do so. The aid of Miss Mensch, head of our milk-room, who understands these matters thoroughly, has therefore been enlisted, and I will take up the occasions on which certain of the popular food preparations are to be used, while Miss Mensch demonstrates just how these foods are to be made, so far as time and circumstances will permit.

Of the principles which underlie the action and the choice of any of the foods there is time to say but little. The fat of cow's milk has long been found difficult of digestion by many infants, the assigned reasons for this varying with the writers. Protein was formerly unduly blamed for producing indigestion, then credited too much with harmlessness, and now is admitted to be digested often well, sometimes not so well. The casein and the whey proteins have each been accused more or less unjustly. The carbohydrate has been blamed as the cause of fermentative diarrhea with reason, yet too greatly charged with this. It has also been found to be capable of replacing the fat in many instances; yet the opinion now prevails that this replacement cannot in all cases be made satisfactorily for long periods, and that it should not be so attempted unless it is rendered necessary by irremediable fat intolerance.

Buttermilk

Let us begin this discussion by considering one of the oldest of the special food mixtures;

* Presented before the Section on Pediatrics of the Medical Society of the State of Pennsylvania, October 12, 1926, at a clinic held at the Children's Hospital, Philadelphia, Pa.

viz., buttermilk, or more properly the buttermilk mixture of the Dutch and German peasants. Buttermilk *alone* is too weak a food for long employment, having about the caloric value of skimmed milk, or a little less. The buttermilk *mixture* fully supplies the caloric needs. It is serviceable in cases where fat is not well borne, but when both protein and carbohydrate are digested well. Its composition, according to König's figures for the composition of buttermilk, is about fat 1 per cent, carbohydrate 11 per cent, protein 4 per cent, varying somewhat with the buttermilk employed. The caloric value runs from 560 to 660 per quart. It answers excellently in many cases of diarrhea in infants, and also often in some vomiting cases. If there is still trouble with vomiting, the sugar content may be suspected, and it is then a good plan to cut down the sugar addition to half the usual amount, just to see whether the case is one which can take neither normal fat nor high carbohydrate.

Method of preparation: To a quart of whole milk is added 2 tablespoonfuls of buttermilk of the day before, or better, a culture of the Bulgarian bacillus. This should be a good liquid culture. I have not found the cultures in tablet form very reliable. The milk is now allowed to stand at kitchen temperature, say about 85 or more degrees, for from 18 to 24 hours. In the hospital we use an incubator for 6 hours with a temperature of 100. If it is not heated long enough, it is not sufficiently curdled; if too long, the curd separates from the liquid portion and the mixture is so sour that it is unsuitable. The buttermilk is now churned in a small glass piston churn, and the butter removed.

A modification of this which we use in the hospital is to employ skimmed milk, to which the culture is added. This removes the necessity of churning, and in place of it the curdled milk is broken up strongly with a fine wire beater.

To 6 or 8 fluid oz. of buttermilk is added 1 level tablespoonful (¼ oz.) of wheat or other flour, and this is rubbed into a paste. Then 4½ level tablespoonfuls (2¼ oz.) of granulated sugar are mixed with this. This mixture is added to the remainder of the buttermilk, and the whole boiled for 25 minutes with constant stirring.

Another modification is used when it is desired to keep the bacilli alive. The milk is then first boiled, a culture added, the buttermilk made, 6 or 8 oz. taken, and the sugar and flour boiled in this in a double boiler. When cool this is added to the rest, which thus escapes subsequent boiling.

The term "whole-milk buttermilk" has not been used. That, by the nature of things, is a misnomer. Buttermilk, according to the dictionary, is "the milk that remains after the butter is separated from it." It does not contain fat. We should use the term "whole lactic-acid milk," buttermilk being just one of the varieties of lactic-acid milk.

Acidophilus Milk

I am not convinced that acidophilus milk possesses any advantage over the ordinary buttermilk, unless it is desired to implant living acidophilus bacilli in the intestines; and it is doubtful whether this can be done in a manner other than temporary. We have used it a good deal in the hospital. We have for long periods made our buttermilk mixture with the acidophilus cultures. I have the impression, however, that the infants do not like it as well as the ordinary buttermilk mixture. I have here only one thing to say about it; viz., that certainly some of the so-called "living cultures" of the bacillus acidophilus on the market contain comparatively few living bacilli. Here in the hospital we make our acidophilus milk with cultures prepared in our own laboratory.

Lactic-Acid Milk

In addition to the two varieties of lactic-acid milk just described, i. e., buttermilk and acidophilus milk, a lactic-acid whole milk may be made by the direct addition of the acid. I shall not go into a discussion of the reasons for this, except to say that the lactic-acid appears to make the fat better tolerated. That it does so as uniformly as has been claimed for it is not borne out by my own experience in this hospital. Still, there is no question that this lactic-acid milk is a very serviceable preparation in many cases. Made with the usual addition of corn syrup, it is of high caloric value, with about 4 per cent of fat, 7 to 8 per cent of carbohydrate, and nearly 4 per cent of protein. The method of dropping the acid slowly into the milk, as originally recommended, was difficult at times to carry out successfully, and we use here always the following modification of it: A quart of milk is boiled and then cooled on ice. One fluid oz. of Blue Label or Red Label Karo (or 2 fluid oz. of a stock solution of half Karo and half water) is now mixed with 2 fluid drams, or more recently 1½ fluid drams, of U. S. P. lactic acid. This is next added slowly to the milk with stirring. Curdling of course takes place, but it is a fine curd, and will go through the holes in the nipples, certainly if these are widened a little.

Vinegar milk has been proposed by Dunham, a *hydrochloric-acid milk* by Faber, and a *citric-acid milk* by Hess, the last-mentioned using lemon juice for the purpose. The acetic, hydrochloric, and citric acids respectively take the place of the lactic acid. I do not know that any one of the four surpasses the others.

Butter-Flour Mixture

This has been very popular with some of us in the hospital. Its purpose, as outlined by Czerny and Kleinschmidt, is to render the fat more digestible by driving off the volatile fatty acids; to fortify the carbohydrate by the addition of sugar and flour, and to reduce the protein to a proportion more nearly that of human milk. As Pfaundler pointed out, a very similar food had long been in use by the peasants of the Tyrol. Whatever the rationale, the food is certainly very often an excellent one for infants not suffering from digestive disturbances. Czerny and Kleinschmidt recommend 7 grams of butter, 7 grams of flour, and 5 grams of cane sugar in 100 c.c. of water as their stock solution, which is to be added to different proportions of milk. Changing the metric measures of the authors into ordinary kitchen measures, the following is the method of preparation:

Two level tablespoonfuls of butter are placed in a pan, and heated over a gentle fire until foaming takes place, and until the odors of any volatile fatty acids present shall have disappeared. This takes from three to five minutes. Two and one-half level tablespoonfuls of fine wheat flour are then added, and the mixture again boiled with constant stirring until it becomes thin and of a brownish color. This takes four or five minutes. Next, 10 fluid oz. of warm water and 1½ level tablespoonfuls of cane sugar are added. The whole is again boiled and rubbed through a fine sieve. This makes the stock solution. For use it is mixed with previously boiled, cooled milk, and the whole kept cool until needed for use. For children under 6½ pounds in weight, Czerny and Kleinschmidt advise two thirds of the stock solution to be added to one-third milk. For those over this weight, three-fifths of the stock may be added to two-fifths milk. The caloric value is high. When mixed two-thirds stock and one-third milk, we get approximately fat 4.6 per cent, carbohydrate 8.2 per cent, protein 1.5 per cent, with a caloric value of 24.6 calories per ounce.

Malt Soup

This like some of the others is really an older preparation than we are prone to imagine. Although brought into prominence by Keller, it was in reality a proposal of Baron von Liebig. It is a food with a reduced fat percentage, a high carbohydrate percentage, and a protein percentage about that of human milk. It has been claimed that the alteration of the percentage of fat and carbohydrate gives it its value, but Moro suggests that this may in part depend upon the reduced protein. It is serviceable in many cases of greenish diarrhea, with large white lumps in the stools. It does not do well in vomiting cases, and it sometimes causes diarrhea where there was previously none. Nevertheless, it is a valuable food in many instances. Its preparation, according to Keller's formula, is as follows:

A mixture is made of 1¾ oz. Av. (6½ level tablespoonfuls) of wheat flour with 11 fluid oz. of cold cow's milk. This is rubbed through a sieve. Another mixture is made of 2½ fluid oz. of malt-soup extract and 22 fluid oz. of warm water. The two are then added one to the other and the whole heated slowly to boiling, with constant stirring, adding finally enough water to replace what has evaporated. The caloric value is fairly high, about 625 per quart. The percentage composition of the mixture as given you is about fat 1.33 per cent, carbohydrate 11.4 per cent, protein 1.58 per cent.

Thick-Gruel Feeding

In some cases of obstinate vomiting in infants, whether or not depending upon pyloric stenosis, thick-gruel feeding is of value, even in the early months of life. This was especially urged by Sauer, and later by Porter and Mixsell, although it must be admitted that it did not first arise in this country. In any event, we may assume a fat indigestion, if it is not a stenosis case (which is treated in the same way), and prepare the food as follows: Five oz. of skimmed milk is mixed with 15 oz. of water. To this is added 10 per cent of starch in the form of rice flour, wheat flour, or farina. We usually use farina in the hospital. There is then added a varying amount of cane sugar, depending upon the case. Very little is used of this at first in vomiting cases. Ten per cent of the 20 oz. equals 2 oz. of the farina, which, when measured, equals about 4 level tablespoonfuls. This is rubbed up with a little water, added to the rest of the water and the milk, and boiled in a double boiler for one hour. It is fed with a spoon or pressed through a Hygeia nipple, being forced through with the bowl of a teaspoon.

Protein Milk

Lastly, let us consider a very popular and serviceable food which should be called casein milk rather than protein milk, because, according

to Finkelstein, who devised it, the casein is present in normal amount, while the whey proteins have been reduced. Let us ignore on this occasion Finkelstein's reasons for its value. They have all been called into question, and yet the food is certainly serviceable, especially for cases of diarrhea. You are all familiar with the description of the method of preparation as given by him. It is too long and too complicated to demonstrate here, and too complicated also for employment in family practice. This has been so widely recognized that there are numerous ready-for-use substitutes on the market. Larosan is one of the earliest, and a very good one. Another is the Mead Johnson & Company Powdered Protein Milk, and another that of the Merrell-Soule Company.

To prepare a mixture with the Mead Johnson product, it is customary to mix about 1 part of the flour (by weight) with 11 parts of water. The powder is rather light, and runs about 4 level tablespoonfuls to the ounce. The best way of mixing it, in preparing say, a 20-oz. mixture, is to take 2 oz. (by weight) of the powder, which measures about 8 level tablespoonfuls, pour it on the top of the water at about 95 degrees, and beat it with a wire beater. The mixture gives a percentage strength very like that of the Finklestein formula.

ABSTRACT OF DISCUSSION

HARRY LOWENBURG, M. D. (Philadelphia, Pa.): Dr. Griffith is to be congratulated on his courage in presenting a demonstration of food preparation. Physicians often seem to think that such work is beneath their dignity. I regard this knowledge as so valuable that I have frequently visited the hospital kitchens when abroad to watch the preparation of the food. It is not enough merely to give instructions to mothers as to the ingredients of foods prescribed. They must be taught the details of preparation, and such instruction can best be given by actual demonstration in the mother's own kitchen.

The slight departure in the preparation of lactic-acid milk from Marriott's instructions to add the milk drop by drop is a good one. The addition of the acid to the Karo syrup obviates the slow and tedious dropping.

In my own experience, Marriott's milk has caused diarrhea, and I have modified its preparation by using cane sugar instead of Karo syrup, and only half the acid advised by Marriott. I boil a tablespoonful of cane sugar and a tablespoonful of flour with the milk, and after it has become thoroughly chilled, add the acid. Made in this way, a more formed stool results, and the preliminary diarrhea is prevented. Most of the babies that develop diarrhea later become constipated.

As Dr. Griffith said, all of these preparations are more or less similar, and many of them may be used interchangeably.

DR. GRIFFITH (in closing): For a long time I have been interested in the new foods that come out, and have tried out a lot of different things. It seems to me that lactic-acid milk is used far too much without proper selection of the cases in which it is prescribed, and I do not believe that any better results are obtained in the healthy child with lactic-acid milk than with the ordinary modified-milk mixtures, if the latter are used in the proper way. We are not using the buttermilk mixture nearly as much as we did a few years ago, but something else very similar has taken its place. Probably it will not be long until some other modification is proposed which we shall all be trying out. All of these preparations are good, but none of them will serve in all cases.

THE FIFTIETH ANNUAL MEETING OF THE PENNSYLVANIA PHARMACEUTICAL ASSOCIATION

The meeting was opened at Buena Vista Springs Hotel, Franklin County, Pa., June 21, 1927, with three hundred members in attendance.

Outstanding among the year's activities reported were the success of the Drug Store Ownership Bill, a successful legislative campaign, with eight other bills affecting pharmacy, and the establishment of seventeen new county and local associations in the State. The Committee on Professional and Public Relations reported a very friendly feeling of coöperation existing between the professions of medicine, dentistry, and pharmacy, and stated that steps have been taken to unite the three allied professions for legislative accomplishments in the protection of public health.

The report of the secretary proved the value of a central office for the Association. The headquarters acts as a nucleus for organized legislative activity, serves as publicity agent for the Association, conducts campaigns for the correction of trade abuses, and carries the State problems and coöperation to the national associations.

President Joseph W. England, in his address, stated that "Pennsylvania pharmacy must present a united front, and do to this it must represent the entire pharmaceutical interest of the State. The logical body to do this is the Pennsylvania Pharmaceutical Association, and not county and local organizations working separately and individually." On the subject of limiting drug stores, he stated: "The most serious factors favoring an abnormal increase of drug stores are the chain and bootlegging stores. The recently enacted ownership law will control the former, and a better and more coöperative administration of the Federal and State prohibition laws will ultimately correct the latter." He closed his reference to the four-year pharmacy course by saying: "If medical schools can cover the vast amount of subject matter they teach in four years, why should pharmacy schools with so much less matter to teach require four years? Three years is ample and any attempt to exact more is entirely academic and not necessary to fit students to practice pharmacy."

The following resolution was adopted:

WHEREAS, Predatory price-cutting and the pernicious methods used by price-cutters are an imposition on the unsuspecting public; and

WHEREAS, These adroit practices, camouflaged in the form of "bargain sales," "one cent sales," "economy" short-cuts, and other get-rich-quick propositions, are driving out of business independent retail stores and promoting a rapidly growing retail distribution monopoly; and

WHEREAS, Competition is the public's safeguard against monopoly, and competition is disappearing as the independent retail store disappears; and

WHEREAS, The antitrust laws are inadequate to protect the public interest against the rapidly developing retail distribution monopoly; therefore be it

Resolved, That the House Committee on Interstate and Foreign Commerce, at the next session of Congress in December, favorably report the revised Capper-Kelly fair-trade bill, known

as "Committee Print No. 1," dated February 17, 1927, in order that it may become a law as soon as possible; be it further

Resolved, That a copy of this resolution, together with an analysis of the revised Capper-Kelly Bill, be forwarded by the secretary of this Association to every member of the House Committee on Interstate and Foreign Commerce and to every member of the delegation in Congress from this State.

An address by Hugh C. Muldoon, dean of the School of Pharmacy, Duquesne University on "The New Pharmacist" referred to the necessity for changes in the system of teaching the pharmacist of today. Dr. Wilmer Krusen, Director of Public Health, Philadelphia, and president of the Philadelphia College of Pharmacy and Science, spoke on "The Relation of the Pharmacist to Public Health." He stressed the need for better coöperation between the pharmacist and the physician, and pointed out the vital part which the pharmacist plays in the education of the public in the protection of health through proper preventive means.

The following officers were elected for 1927-8: President, Wilbur B. Goodyear, Harrisburg; first vice-president, Scott Paisley, New Castle; second vice-president, Edward T. Hahn, Philadelphia; secretary-treasurer, Joseph G. Noh, Harrisburg; member executive committee, Joseph W. England, Philadelphia.

STUDY OF DENTAL EDUCATION

Bulletin Nineteen of the Carnegie Foundation for the Advancement of Teaching, is devoted to dental education in the United States and Canada.

The teeth are more apt to become defective or diseased than any other part of the body. In 1924, of the 135,640 officers and men in the United States Army —who as a group are presumably among the healthiest persons—112,507 were treated for dental disabilities. Disease germs that enter the body through decayed teeth, or along the side of disordered teeth, are frequent causes of such serious and common maladies as rheumatism, kidney trouble, and heart failure. There are nearly 70,000 dentists in the United States and 4,000 in Canada, the number of physicians being only about twice as large in each country.

Prevention of dental ailments, treament and cure of dental disorders, and artistic placement of comfortable artificial substitutes for parts of deficient teeth, or for teeth that have been removed, are included in the practice of dentistry. Dentistry has attained its most advanced development in the United States and Canada, where it is highly organized and has long been conducted as an independent profession. Physicians are not trained to practice dentistry, and seldom give attention to dental conditions. For the professional education of dentists there are 42 dental schools in the United States and 5 in Canada, nearly all of which are associated with leading Universities. Proprietary dental schools have ceased to be acceptable, and only two survive. The *Bulletin* considers many problems of public concern in the training of dentists. As a pioneer study in this field it represents a prolonged effort, including visits to each dental school in North America.

The *Bulletin* uses the term "health service," having obviously a broader significance than "healing art," to designate collectively all special efforts to maintain or to promote health, to prevent disease, to restore health by treatment and cure of sickness, and to ameliorate the discomfort, distress, and disability of incurable ill-health. Among the most important of such agencies, besides medicine and dentistry, are education for the prevention of disease, public-health administration, nursing, and pharmacy.

The public suffers when any group engaged in health service belittles the honorable efforts of another. In North America, dentistry has been practiced primarily as a mechanical art concerned chiefly with measures of repair, and has not appealed to the imagination or interest of medicine. At most medical schools there is little or no instruction on dental disorders, and the students acquire the prevailing medical indifference to dentistry. At dental schools the students receive inadequate instruction in oral medicine. "Antagonism between medicine and dentistry cannot be explained on any basis of public interest or advantage and has no justification in any sentiments that are worthy of respect, for both professions are agencies for health service and cannot render it faithfully on any other conditions than those of earnest and effective coöperation. With growing understanding that dentistry is primarily health service, these traditional disharmonies should rapidly be replaced by mutual respect and helpfulness in the interest of better service for the patient."

Although medicine has not been interested in oral health service, dentistry has set an example that medicine would do well to follow. For many years dentists have systematically encouraged their patients to submit to periodic examinations for the detection and treatment of dental disorders in their incipiency and for the repeated application of measures intended to prevent or delay the development of disease. The importance of this procedure for children, in whom most dental abnormalities and defects may be arrested, cured, or corrected, cannot be overestimated. These precautionary efforts exemplify an ideal of health service—to keep people well—that has not yet appealed strongly to the average practitioner of medicine, who, manifesting little concern about prevention of illness among his private patients, seldom gives them personal advisory health service when they are sick.

There is urgent need for great improvement in the quality of teaching in medical schools and for a complete reorganization of the medical curriculum, which is essentially that of fifty years ago overlaid with the redundancies of one scientific or clinical specialty after another, the load upon the student having become almost unbearable and the fundamental sciences quite detached from their applications. The medical curriculum should be reconstructed from the standpoint of practice rather than theory, so that the student may be led into technical knowledge largely through its applications and the bulk of the whole may be reduced to a quantity that can be taught effectually and assimilated thoroughly. Instead of making the curriculum an educational kaleidoscope, in a prolonged, wasteful, and unsuccessful effort to train the young graduate to be as competent as an experienced physician, the program of instruction should aim to prepare the student to initiate safely a dependable general practice, to continue to be an earnest student throughout his career, and to grow rapidly in capacity through experience.

Among the most general conclusions of the inquiry are these: (1) Dentistry is not only a mechanical art for the maintenance or restoration of dental functions and facial comliness, but, as one of the most useful means to keep people well and to cure or alleviate disease, it is also an important division of health service. (2) Dentistry, in the quality and efficiency of its health service for the patient, should be made the full equivalent of an oral specialty of the practice of medicine, without impairment of its present mechanical and artistic efficiency in reparative treatment. (3) This could be accomplished, without requiring the dental student to

obtain a full medical education, through extension and improvement in universities of that system of dental education which, though separate from medical education, is closely related to it and should be more intimately associated with medical schools, hospitals, and dispensaries. (4) Improvement of dental education, in accord with the suggested reconstruction of medical education, could best be brought about by pursuit of the following three main objectives: (a) the preliminary education and instruction in the fundamental sciences should be practically the same in general scope and quality as for medicine after the proposed improvement of the medical curriculum; (b) the training peculiar to dentistry should be sufficient to assure both ability to initiate safely a dependable modern general practice of dentistry and capacity to grow in proficiency; and (c) the most advanced phases of dental practice should be reserved for systematic optional graduate study by prospective specialists. (5) These three main objectives could be attained through the requirement of (a) two years of preparatory work in an academic college, including several extra courses such as mechanics and fine art, that would stimulate interest and develop ability in the prospective practice of dentistry or reveal ineptitude; (b) three years of intensive and well-integrated effort in an undergraduate dental curriculum for the training of general practitioners only (the years to be lengthened by beginning them with summer sessions or otherwise, wherever favorite excesses cannot be discontinued); followed by (c) optional supplementary full-year graduate curricula for all types of specialists. On this program, currently known as the "two-three-graduate plan," general practitioners could be trained in five years after graduation from high school. The proposed improvements do not disregard the economic and social factors involved. All but two dental schools in North America require at least one year of work in an academic college for admission to a four-year professional curriculum, or the equivalent in time—a total of at least five years after graduation from high school. At present there is no provision for the formal training of specialists, who, after graduation as general practitioners, are usually self-taught or acquire experience in association with specialists.

Despite the membership in universities, most dental schools have received indifferent financial support. Only six in North America have current income from endowment, nearly all of the universities having failed to impress upon the public the importance of this need. The announced inability of three universities, because of lack of funds, to continue their dental schools brings this national predicament of dentistry sharply to public attention.

Prevention of dental deficiencies in children is the most urgent general responsibility of the dental profession. In most children the enamel protective covering of the teeth is imperfect in spots. If these defects are noted promptly after the emergence of teeth, and the deficient portions removed and properly replaced by good fillings before decay sets in or very soon after it starts, the repaired teeth may be preserved indefinitely, not only in position but also in good health. General realization of the import of "preventive" dentistry, and of the lifelong benefits of special dental care for young children, have quickened interest in research for the discovery of means completely to obviate dental defects and also in the creation of a "growing number of public or semipublic agencies, chiefly under auspices of educational and health organizations, for the wider extension of dental service, especially to children of preschool age, to children in public schools, and to children of parents who are financially unable to pay the conventional fees of the private practitioner. Benefactions, such as the Forsyth Dental Infirmary for Children (Boston) and the Eastman Dental Dispensary (Rochester), associated with medical and dental schools and hospitals, are needed in all parts of this country and Canada for the solution of health problems that involve the coöperation of dentistry.

Women have shown an increasing tendency to engage in dental practice. The growth in their number in the United States is indicated by these census figures: 1870, 24; 1926, 2,100 (estimated). The capacity and opportunity of women to promote especially "preventive dentistry for children," under conditions of growing public concern and appreciation, should attract much larger numbers to this field. Nearly all of the dental schools in North America are open to them. The present attendance is approximately 200.

During recent years there has been a rapid development in the auxiliary practice of dental (oral) hygiene. This practice by lay assistants, consisting of procedures for the thorough cleansing of teeth, is placed by statute under the supervision of dentists. In addition to the direct practice, dental hygienists teach general hygiene, oral hygiene, dietetics, sanitation, and health habits not only as assistants in the offices of dentists, but also to assemblies of children, mothers, industrial workers, and other groups in need of instruction in ways and means of health promotion. In most of the statutes these practitioners (women) are licensed as dental or oral hygienists rather than nurses, because, instead of helping chiefly to treat or cure disease, they practice means designed primarily to prevent it. Dental hygienists are trained in the dental schools in eight universities, and also at the Forsyth Dental Infirmary for Children and the Eastman Dental Dispensary. There are now in active practice about 1,800 dental hygienists who, since 1922, have maintained a national organization.

Every negro having a communicable disease is a menace to the health of all with whom he may be associated, and particularly to the well-being of those he may serve personally and intimately. Dental and oral maladies, which commonly injure health by interfering with nutrition or occasioning general disorders, also lower resistance to numerous communicable diseases. The average negro and his children, under prevailing conditions in North America, are almost if not wholly as susceptible to dental disorders as the average white person. In 1925 there were about 1,300 colored dentists in the United States, a ratio of 1:8,500 of negro population. Most of these practitioners live in the larger cities. Improvement in all aspects of health service for the negro group is an urgent national problem.

There is great need for methods to prevent prenatal development of defects in teeth, and to obviate the occurrence of dental disorders at all ages. Measures of repair and treatment also require continual betterment. "Comprehensive and coördinated research . . . which is essential for the discovery of ways and means for the prevention of dental defects (and their most effectual repair), cannot be conducted without adequate financial support."

Although infections of the teeth are frequently the primary causes of numerous types of fatal disease, many of which develop insidiously, there is regrettable uncertainty regarding adequate treatment of them.

Copies of this *Bulletin* may be had without charge on application by mail or in person to the office of the Carnegie Foundation, 522 Fifth Avenue, New York.

THE ATLANTIC MEDICAL JOURNAL

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AUGUST, 1927

Editorials

THE ANNUAL MEETING

The Seventy-seventh Annual Session of the Medical Society of the State of Pennsylvania will be held at Pittsburgh, October 3-6, 1927, which city has been preparing for months for your coming.

All plans are completed in regard to the scientific program, the meetings of the House of Delegates, and the evening public meeting. Everything will be done to assure you a good time, also the visiting ladies. The big social event, of course, will be the reception to the president.

Everything is being done to increase the attendance at the annual meetings, and assistance toward this end is sought of every member. If "it is axiomatic that attendance at medical meetings is relational to the scientific interest of the programs," then a large attendance should be assured, and members are urged to familiarize themselves with the program printed elsewhere in this issue.

Your most important engagement each year should be your attendance upon the annual session of your State Society.

Each member is urged to read the annual reports of the officers and various committees that will be published in the September number of the JOURNAL; more especially should they be read by the delegates, who should attend. These committee reports are summaries of the work of the State Society for the past year, and contain recommendations to cope with the problems.

When a member of a component county society accepts an election as a delegate or alternate to our State Society, he assumes a moral obligation to fulfill its requirements. He should become more conversant with our Constitution and By-Laws, and know the duties pertaining to the House of Delegates. He should be acquainted with the annual reports of the various committees, and if his mind is not clear upon any of the matters covered therein, he should make an attempt to become better informed. He should not rush to the place of meeting, register, and as quickly leave. He should not only attend the sessions, but take an active part in the meetings of the House. For be it remembered that the woof and fabric of the structure of our society depends upon the transactions of the House of Delegates. So important is the proper conduct of the affairs of this legislative body that the American Medical Association and several of the state medical societies annually elect a Speaker of the House, known to be trained in parliamentary law, and safe and sound in conducting meetings of this character.

The possibilities of having class reunions, college reunions, fraternity reunions, and alumni gatherings at the annual sessions should be borne in mind, planned, and duly executed. Such activities tend to increase the attendance, and are a further evidence of the friendliness existing among our members.

The annual session also affords a wonderful opportunity for the councilors to meet the officers and physicians from the county societies constituting their respective councilor districts, and to discuss the problems of their district. Several such gatherings were held during the annual session of the Ohio State Medical Society last year, with very satisfactory results.

By careful reading of your JOURNAL each month and attendance upon the meetings of your county and state societies, you will learn of the devious ways in which "baneful influences are operating today to rob the profession of its influence, its independence, and its income; that they are due largely to the frailties and follies of the physician himself; and that the remedies

lie in his own hand." It is by continual contact with your county and state societies, your JOURNAL, and the councilor of your district that you will learn the remedies. "If these influences are to be counteracted, physicians must be qualified and willing to give the high grade of personal service to which the patient is entitled. They must evince that same benevolent, altruistic, and charitable spirit that has always characterized the profession, but they must show commercial organizations that are making tools of them for profit that they will conduct their professional matters on sound business principles."

The functions of a state medical society may be said to fall into two general classes, "the improvement of physicians as physicians, and the result thereof—the betterment of the public health. After all, the main obligation of the society is toward the doctors themselves. This is not intended selfishly; but the logical result of assisting physicians in their natural inclination toward the broadening of their knowledge and the enhancing of their ability to apply it is, of course, the betterment of public health," and, in the final analysis, our lives are devoted to service. Attendance upon the annual sessions of your state society will afford you the necessary contacts to increase your ability to serve humanity.

Hark ye! The Call!!

TRISTATE MEDICAL CONFERENCE

In this number of the JOURNAL appears an abstract of the report of the meeting of the Tristate Medical Conference, held at Scranton, Pa., June 18. In many ways this was the most important meeting that has been held. The session was devoted to the discussion of two subjects: "Education of the Public in Medical Matters," and "The State-wide Antidiphtheria Campaign."

It is of interest to note that the greatest difficulty seems to be to arouse from their lethargy the members of our profession to the necessity for being on tiptoes in matters of preventive medicine; that in all endeavors it first becomes necessary to educate the physician—to advise him how, when, and where things should be done. He should be assuming leadership, but instead too often he must be dragged along. Too frequently the public is far better instructed upon matters of preventive medicine, because the physician will not keep abreast of the publicity that is being continually given to the community, and it is regrettable that when patients talk these matters over with their physician, the latter seems to assume the attitude, "What is it all about?"

We must realize that one of our greatest problems is the education of the public in medical matters, and that to do so costs money. The county societies must realize their increasing responsibilities to themselves and to the public and the necessity for funds to meet these obligations.

The end results of our state society endeavors are in direct proportion to what is paid by members. Note the laudable enthusiasm of the members of the Illinois State Medical Society. They started the work of education of the public in medical matters by popular subscriptions, about twenty-two per cent of their members contributing $13,000. There is altruism that may well be emulated. Then they increased the pro rata assessment of their county societies from $5 to $8 to carry on. They have a woman who is a full-time director in charge of the office of the Lay Education Committee. Massachusetts has recently appointed an executive secretary. California, Texas, New Jersey, and Wisconsin are working hard, and some of the other states to a lesser extent. Many of the states are showing little or no activity.

We must meet the issue, and take our part among the states leading in the education of the public on medical matters.

The discussion of the conference also plainly demonstrated that the physicians of the three states are falling down very badly on periodic health examinations. The public is being thoroughly instructed. The physicians are totally indifferent. The people, consequently, in too many instances are having this examination made by an institute the physician condemns. There is no one to blame but himself. He must realize that he is the basic factor in all matters medical, and he must assume his full responsibility. Unless he does, he fails to fulfill his mission, and it is his financial loss. He must be keenly awake to the necessity of periodic health examinations of children of the preschool age. This is essentially the problem of the attending physician. When the children are in school, various agencies begin to take hold, but much should be done previous to the time they go to school, and this very essential period must be properly consummated by the attending physician.

The need of diphtheria immunization is most essential, and here again in the preschool age, especially three to five years of age, is the time when this very important procedure should be done. The physician must advocate the necessity for it, urge its acceptance, and show his willingness to do it. The report of Dr. Walter

F. Donaldson, showing what has been accomplished by diphtheria immunization in Pennsylvania, is more than worth while. It is the end result of a great deal of correspondence and work, affords our membership a most excellent résumé of our State's activities, as in many instances the county reports quoted by him are typical of similar reports received from other counties, and should be an incentive to every physician in the State to renewed effort. Diphtheria, like typhoid fever and other infectious diseases, should be wiped out, and to repeat, this can be done only by the zeal of every physician in carrying the message to each household with children and urging immunization. The responsibility is primarily on the shoulders of the physician, more especially in children of the preschool age. We must realize this. Not only should we urge immunization, but show our willingness to do it.

Our members are earnestly requested to read the report of the Tristate Medical Conference, which appears in this number of the Journal, as it contains much of value, from every angle, on the subjects under discussion.

MEDICINAL WHISKEY

Our members no doubt have read a great deal in the daily papers and in the *Journal A. M. A.* in regard to medicinal whiskey and the action of the House of Delegates of the American Medical Association at the annual session held in Washington, in May. To say the least, the House of Delegates wisely used moderate language in its protest against the dosage prescribed in the Federal Prohibition Act. It seems to be current opinion that the limitations on the prescribing of medicinal whiskey were devised for the purpose of checking an abuse notorious in every community. The laity also seems imbued with the idea that it is a marked act of impropriety for Congress to attempt to legislate regarding the quantity of stimulants which a physician may determine to be necessary to the welfare of his patients under whatever circumstances may develop.

We fully appreciate that the Federal Prohibition Law recognizes the value of whiskey in medical practice, that it does not deny the legitimacy of its medicinal use. The Supreme Court has so ruled. "It is true that a majority of the Justices of the United States Supreme Court ruled that the restriction is constitutional. But the four who wrote a minority opinion pointed out that if the power exists to limit the quantity to a pint in ten days, it exists to limit the quantity to a tablespoonful, or a teaspoonful, or a few drops during the same or any other arbitrary period of time, with the result in substance and effect that the definite limitation of the prohibitory power by the words 'for beverage purposes' vanishes altogether."

We appreciate, too, that constitutional prohibition bars the production and sale of alcoholic liquors for beverage purposes. We were, therefore, somewhat amused at a Federal ruling allowing the use of certain liquors for flavoring in the cooking of foods. Naturally the question was raised, when is liquor a medicine—a beverage—a food?

In view of the serious handicap that is placed upon the physician in the treatment of certain diseases, we cannot see how the plea of the American Medical Association can be ignored by Congress.

Naturally it will be a problem of the Federal authorities for the enforcement of prohibition "in which every dry interest in the country and every one concerned in the maintenance of Federal prohibition ought to join, to discover some formula or device by which the supply and distribution of medicinal whiskey can be sufficiently guarded to prevent a 'prescription scandal,' and yet afford the proper freedom for the honest and legitimate use of stimulants in medical practice."

The question is really not a matter of prohibition at all. The section of the Act of which the American Medical Association justly complains is an excrescence. It does not have anything to do with the real purpose of prohibitive legislation.

If Congress can interfere with medical practice in one respect, it can in another, as well exemplified by the action it took in regard to whiskey and heroin. No doubt the next session of Congress will find the medical, pharmaceutical, dental, and veterinary associations of this country lined up with a solid front, requesting Congress to rescind the unfortunate action it took in regard to the latter drug.

The physician's responsibility to his patient is very great, and he is entitled to the free exercise of it.

THE HEALING ART COMMISSION OF THE COMMONWEALTH OF PENNSYLVANIA

The members of our Society will recall that at the recent session of our State Legislature, our State Medical Society introduced a One Board Bill to govern the practice of the healing art in this Commonwealth. There were bills introduced

by the various cults to govern their respective activities. None were acceptable.

The Legislature finally adopted a joint resolution, known as Act No. 396, which is as follows:

Whereas, There is at the present time an apparent need of comprehensive legislation governing education and licensure of persons to practice in the various branches of the healing art; and

Whereas, A wide difference of opinion exists as to the nature and type of legislation which should be enacted by the General Assembly; therefore,

SECTION 1. Be it resolved &c., That a commission is hereby created to be known as the "Commission to Study the Laws Relating to the Healing Art." Said commission shall consist of twelve persons, ten of whom shall be appointed by the Governor. Of the persons so appointed, one shall be licensed and qualified to practice as an allopathic physician, one as a homeopathic physician, one as an eclectic physician, and one a naturopath, and four shall be unprejudiced laymen unconnected with any branch or school of the healing art profession.

The chairmen of the Committees of Health and Sanitation of the Senate and House of Representatives for the session of one thousand nine hundred and twenty-seven shall be ex-officio members of the commission.

The members of the commission shall serve without compensation, but shall be reimbursed for all expenses necessarily incurred in the performance of their duties.

SECTION 2. The commission shall organize by the appointment of a chairman. It shall have power to appoint a secretary and such stenographers and employees as may be deemed necessary, and to fix their compensation.

SECTION 3. It shall be the duty of the commission to study the laws of this State and other states and countries relating to the education, examination, and licensure of persons practicing the several schools of the healing art, the laws regulating the various schools of the healing art, and the administration of such laws; to frame a bill or bills for the proper regulation, control, and administration of these various schools, and of persons engaging or intending to engage in the practice of the healing art; and to make a report of its work, together with drafts of legislation it proposes, to the General Assembly of one thousand nine hundred and twenty-nine, not later than February first.

SECTION 4. The sum of twenty thousand dollars ($20,000) or so much thereof as may be necessary, is hereby specifically appropriated to said commission for the payment of the expenses of the members of the commission, the compensation and expenses of the secretary, stenographers, and employees, for printing and any other expenditures lawfully incurred in carrying out the provisions of this act.

Approved—The 4th day of May, A. D. 1927.

JOHN S. FISHER, *Governor.*

This Commission was organized on July 6, 1927, in the Reception Room of the Governor of Pennsylvania, at Harrisburg. The Commission is composed of the following members appointed by the Governor: Hon. George Wharton Pepper (layman), Philadelphia; Rt. Rev. John C. Ward (layman), Erie; Mrs. Fannie S. Long (layman), Wilkes-Barre; Mrs. Lucy K. Miller (layman), Pittsburgh; Dr. Ross V. Patterson, allopathic, Philadelphia; Dr. R. S. Marshall, homeopathic, Pittsburgh; Dr. E. S. Shaulis, eclectic, Indiana; Dr. Blanche R. Young, chiropractic, Pittsburgh; Dr. H. M. Vastine, osteopathic, Harrisburg, and Dr. Robert W. Berger, naturopathic, Etna. In addition thereto, the two ex-officio members are Hon. Wm. C. Freeman, Cornwall, and Hon. James J. Heffernan, Philadelphia.

The Commission organized by the election of Senator Freeman as chairman, Representative Heffernan as vice-chairman, and Dr. Francis D. Patterson, Philadelphia, as secretary-treasurer.

The Commission at this time is engaged in making a study of the laws now in force in this and other states and foreign countries governing the practice of the healing art, and plans later in the fall to hold public hearings.

CARNEGIE FOUNDATION BULLETIN ON DENTAL EDUCATION

In this number of the JOURNAL appears a summary of *Bulletin Nineteen* of the Carnegie Foundation, which is the report of a study made of dental education in the United States and Canada.

The report truly states that physicians seldom give attention to dental conditions. This no doubt is due to the fact that little or no instruction is given in the medical schools on dental disorders, which explains why medical students acquire the prevailing medical indifference to dentistry.

The report also cites the general state of disinterest on the part of the physician in periodic health examinations in comparison with the systematic encouragement given by the dentists to their patients to have periodic examinations for the detection and treatment of dental disorders in their incipiency.

That "prevention of dental deficiencies in children is the most urgent general responsibility of the dental profession" is very true, and we as physicians must realize our responsibility, by referring all children showing any need for dental attention to the dentist. We have been too negligent in the past in this regard, and should no longer permit such indifference.

While the medical-school curriculum is overloaded in many respects, still it would be a distinct advantage to have a few lectures given during the junior year by a dentist, so that the medical student may be properly informed in regard to the relation of the physician to dentistry.

Our members should read this summary not only to be better informed upon matters pertaining to medicine and dentistry, but for much

valuable information it contains for the physician.

We must realize the importance of our daily association with dentistry, and the summary of the *Bulletin* will afford much enlightenment.

FURTHER NEED FOR PERIODIC HEALTH EXAMINATIONS

One out of every twenty-five Philadelphia boys who entered the Citizen's Military Training Camp, Fort Howard, Md., in July was sent home. Medical examinations led to the rejection of four per cent of the contingent on account of physical defects.

This is but an incident to remind the medical profession that it is not properly urging on its clientele the need of periodic physical examinations. Every family should be advised as to the necessity for annual health examinations of all its members, irrespective of age. Publicity incident to the happening here recorded more forcibly calls to the attention of the people the urgency of these examinations. An indifferent or lukewarm physician is a wet blanket to the proposition. Every medical practitioner should be alert to the value of a regular overhauling, and always should *make the opportunity* to advocate it to patients.

Whenever the newspapers record the death of notable men and women there is always a reaction, in that a percentage of people, suspicious or not of impending trouble, will consult their physician, only to be dismissed with the usual assuring pat on the shoulder or wave of the hand, and its accompanying "Don't worry," or "You are all right," or "Don't be unnecessarily alarmed."

The reports from many states are to the effect that the profession as an entity is falling down on the question of periodic health examinations. We can hope only by "reiteration, reiteration, reiteration," without irritation, to bring about the desired result.

"WHY DO THEY CALL 'EM DRUG STORES?"

Under this caption there appears in the March issue of *Nation's Business,* an article by William Boyd Craig. In regard to the subject matter, an editorial note states: "One of the strangest trends of modern merchandising is the aptitude of the drug store to take over the selling of almost every type of article. Goldfish, ukuleles, live bait, honey, air guns, or a book to read over Sunday—you may find all these and more at your own druggist's." The article asks certain pertinent questions: "Why does he still call his shop a drug store? What determines the items he carries? How much of a drug store, actually is a drug store? How far will the tendency to become a baby department store go? Will the old-time apothecary shop return? Or have alarm clocks, electric toasters, flashlights, dolls, coffee pots, and even groceries won a permanent place on the shelves of the so-called drug store? And what part does the chain store play in this transitional retail drama?"

It has been estimated recently by the United States Census Bureau that each drug store has about 1,400 customers, a grocery store less than 500, and a book store about 35,000. Competition exists and must be taken into consideration. The average druggist carries about four times the number of items carried by a grocer. So keen is competition that it has been determined in Philadelphia that there is a grocery store for every 250 people, and a drug store for every 1,000. A certain very active druggist stated that "Our prescription trade will average between 10 and 15 per cent of our total sales. Proprietary articles, that is, patent medicines, will come to just about that. Together they make just about one-third of our total sales. My soda fountain and my prescription department run a close race in volume of business done, though there is a little better profit on prescriptions." He further stated that too many prescriptions are never called for, consequently druggists should demand payment in advance.

Salesmanship is very important in the modern drug store. The chain drug store is a big factor in competition. It would seem that the chain stores, which constitute about four per cent of the whole number of retail druggists, stick to the cities, and deal more with specialties. Some chain stores have no prescription counters, a central filling station being used. It would seem that the chain store is a causative factor in increasing the prescription work in the real apothecary shop.

Window dressing is a very important matter in any store. Properly done it invites business, it attracts customers. It is an art to dress a window properly. Again, a window may be most unattractive, or even repellant. We could never understand why so many drug stores fill their windows with fountain syringes, whirling sprays, bed pans, urinals, and the like. Such window displays are offensive, and the retail druggists should abolish this procedure of displaying their wares.

There is an obligation the physician owes the druggist, and one of which we must take cog-

nizance. Too frequently we are prone to write prescriptions for preparations which have been called to our attention by the recent visit of a detail man, more especially when our desks have been littered with samples. It invariably means that a druggist must borrow enough of the preparation from a neighbor, possibly having called by phone several stores before obtaining it, or secure the smallest purchasable quantity from the jobber. The chances are that only one prescription will be filled, so the customer is charged an exorbitant price, and the article remains on the shelf. Every drug store has a cemetery of such preparations, and our profession should be more thoughtful than to be instrumental in causing the druggist to stock his shelves unduly with preparations of which we have no knowledge, for which we write a few prescriptions whose therapeutic value we never determine, and our patients are compelled "to pay the freight" for our lack of consideration of their best interests. We heard a very distinguished physician at a county medical society meeting, much to the surprise of all present, give a learned description of the effects of a certain digitalis preparation in cardiac conditions. Every one sat aghast. We had not appreciated his irony, until he concluded his discussion with "I know these facts are true, because there was a detail man in my office this morning who told me they were." Then every one roared with laughter.

Know your pharmacopeia, and prescribe accordingly.

JOTS AND TITTLES

New Method of Cancer Study.—British physicians have evolved a method of cancer study by motion pictures which was described at a meeting of the British Empire Cancer Campaign held in the House of Lords July 11th. The cells are photographed over varying periods up to two days, and the film speeded up 906 times. The films are said to resemble those taken of unfolding flowers, and give a precise record of the growth of the cancer cells.

Studies of the Brain.—It has recently been announced that work done by physicians of Munich indicates that when a part of the brain has been removed because of disease, the remaining portion may be trained to assume its functions.

According to Dr. Frederick Tilney, professor of neurology at Columbia University, "there was a definite prehuman stock, capable of producing both anthropoid and man," and the human brain is in an intermediate stage and probably due for much higher development in the course of time.

A Moving Story.—Physicians are accustomed to thinking of themselves as a stable element of the population, but the JOURNAL mailing department, reflecting as it does any shifting among the professional personnel of the State, was prompted by curiosity to keep a record of removals for a year, during which there were 531 such sporting events registered—an average of over 44 per month. Including the changes subsequent to deaths, resignations, and addition of new members, there were more than triple this number of corrections to be made to the list monthly. Which reminds us that every now and then some one writes us: "Please change my address to 57 Pickle Avenue, New Condiment, Pa.," or something of the kind. This puts the mailing department in a pickle, for without any inkling of the old address, it sometimes requires an hour or more of searching to locate the stencil belonging to our spicy correspondent. *Please* don't forget to inkle when you change your address, and *please* don't forget to notify us, so that you may not miss any numbers of the JOURNAL. So many members leave this to the post office department—which is really rather careless of them—don't you think so?

Another Knock.—While we are about it, we do wish our correspondents would refrain from addressing us as the *Atlantic Medical Monthly*. If you will consult the front cover, you will see that our name is the ATLANTIC MEDICAL JOURNAL—which is quite a different proposition. A *monthly* can be issued but one a month, but a *journal* may have two or more editions a day if it so desires. True, at the present time we are a monthly, but why limit ourselves by name? A few days ago we actually received a letter addressed to the *Atlantic Monthly*, Harrisburg, Pa.—and it was meant for us, too. This may do credit to the prestige of the lay magazine which carries that cognomen, but it is a bit discouraging to discover that our own members do not even know our name. In deference to those who persist in addressing our mail to former editors, former addresses, and the former *Pennsylvania Medical Journal* (of which this publication is a continuation), as well as to almost unrecognizable abbreviation of our present name, such as *At. Med. Jour.*, we repeat that the present editor is Frank C. Hammond, M.D., the business manager, M. S. Blair, and the proper address

ATLANTIC MEDICAL JOURNAL,
230 State Street,
Harrisburg, Pa.

Now for a Boost!—You will be specially interested in the Convention Number which is to appear in September. In addition to some excellent papers on laternal-sinus infection, dermatology in relation to internal medicine, epidemic encephalitis, and a number of unusual case reports, there will be a full account of the convention doings—social and scientific—reports of officers and committees (and from rumors that we hear floating around, they will contain some *big stuff*), the index for the year, and an unusual volume of first-class advertising. You know advertising is like love—it makes the wheels go round; it's like a good wife—when she's present we neglect her, but when she goes away, golly! how we do miss her! Send your flowers to the advertisers while they are with us. Don't wait till their affections are alienated by other more attentive wooers and they get a divorce. We bet you wouldn't like a journal without advertising any better than you would like a convention without exhibits: And while we think of it, the exhibits are the life of the show, so don't forget to take them in while you are visiting the Hotel Schenley, at Pittsburgh, October 3d to 6th, 1927. By the way—have you made your reservation yet? Dr. I. Hope Alexander, Jenkins Building, Pittsburgh, Pa., will take care of you if you have any trouble.

Cleanliness Institute.—The Association of American Soap and Glycerine Producers has recently established this organization, with headquarters at 45 East 17th Street, New York City, to coöperate with other welfare associations in promoting cleanliness and thus advancing community health and welfare. Its work will be educational, and the industry has subscribed $500,000 for the first year's work. The movement was launched at a dinner on June 23d at the Park Lane Hotel, New York City, which was attended by 150 representatives of educational and health and social agencies. The staff of Cleanliness Institute has been drawn from the fields of public-health education and community organization. Directing its program is Roscoe C. Edlund, former executive head of the Hampden County Improvement League, Springfield, Mass. Its educational consultant is Sally Lucas Jean, a pioneer in developing health literature for the school child. Dr. W. W. Peter, famous for his health work in China, has been retained as the Institute's health consultant. Miss Julia B. Tappan, formerly with the U. S. Bureau of Education, is director of the school department, and Miss C. Margaret Munson, recently of Massachusetts Institute of Technology, is research librarian. A national program has been undertaken, and the Institute will operate for the present through three departments —research, information, and education—all of which have placed themselves at the disposal of the existing health and social agencies of the country as auxiliary aids. The work of other health and welfare agencies will not be duplicated, but an effort will be made to strengthen their programs.

Special Number of the Medical Comment.—The Cambria County Medical Society has issued a special number of its publication devoted to the new Conemaugh Valley Memorial Hospital which had its medical dedication on July 14, 1927. This issue is very attractive, and the Society is to be congratulated on its production.

Directory of the American Board for Ophthalmic Examinations.—The publication of the list of those granted the certificate of the American Board for Ophthalmic Examinations, together with a brief record of the medical applications of each and a short history of the Board and its purpose and methods, gives an opportunity to express an appreciation of this endeavor. Much credit can be given to the originators of this idea and to those who have so earnestly carried it out. A comparatively small group of men have devoted much time and energy to this work, and by their loyalty have made this certificate a thing of great value. Though the list of those passed by the Board contains only about five hundred names, it is becoming obvious that it is including year by year a larger percentage of the best-qualified men. The very publication of this directory will help the cause, for it is going to be a very useful little book. The increase in workmen's-compensation acts and the present tendency to carry every complaint to the bar, are forcing most large companies to use physicians more and more; and they will welcome an authentic list which already means that the inclusion of a name therein is a guarantee of proficiency, and which will soon mean that the burden of proof is on the ophthalmologist whose name is not on the list.—Abstract of Editorial, *American Journal of Ophthalmology*, June, 1927.

Campaigns for Medical Schools and Hospitals.—One of the strongest arguments that can be made in behalf of the campaigns for new buildings for medical schools is the necessity for more doctors if people living in the country are to have the benefits of medical attention. The seriousness of this dearth of physicians in many Pennsylvania towns has already been pointed out. Confirmatory evidence of this same lack comes from other states, more especially Vermont, where the decline in rural districts is even more marked. In that State 110 towns in which doctors formerly lived now have none among their inhabitants. Fifteen years ago there were 635 physicians in the State; in 1926, there were 497. These figures were quoted recently by Dr. J. N. Jenne, dean of the Medical School of the University of Vermont. He predicted that 15 years from now the State would contain not more than 250 physicians if the medical schools continued to graduate their students in the present number. During the past five years only five young doctors with diplomas from medical schools outside the State have entered into practice in Vermont. In the meantime, the number of physicians in practice has been declining at the rate of 70 a year. It is difficult to see how a healthy rural life can be maintained without an adequate number of doctors to look after the population. These are facts which should be borne in mind when city people are asked to contribute to the extension of the medical schools.

Standing Orders to York Visiting Nurses.—Instructions issued by the Visiting Nurse Association, and approved by the York County Medical Society June 2, 1927, include the following provisions: If no physician is in attendance, or if no orders have been left for the field nurse, the following orders may be followed. The family *must be instructed* to summon a physician before the nurse's next visit. *All new patients*—General isolation routine if communicable disease is suspected; general or partial care as the situation indicates. If the patient has elevation of temperature, liquid diet and plenty of water are advisable. The family is instructed in the hygiene of the sick room, with special emphasis on cleanliness and proper ventilation. *Burns* —Normal-saline or wet boric-acid dressing. If burn is severe, summon the family physician at once, if he is unobtainable, removal to hospital is advised. *Infantile diarrhea*—The attendance of the family physician should be urged. Nothing but boiled water is advised. *Infantile convulsions*—The family physician should be called at once. Give warm mustard bath, warm saline or soap-suds bowel irrigation, and apply ice or cold cloths to head. *Constipation in infants*— In emergency, the nurse may advise enema or soap stick, if the doctor has dismissed the case. If the condition is habitual, the physician's advice should be urged. *Earache*—No treatment, refer to family physician always. *Discharging ears*—No treatment, consult family physician. *Minor dressings*—Dry dressing, saline or boric acid only. *Sore throat and colds*— Isolate. Encourage drinking of water. Refer to family physician. *Accidents or emergencies*—Attendance of the family physician is imperative. First-aid measures as indicated, until arrival of physician. *Delivery before arrival of attending physician*—The nurse should not tie and cut the cord unless the placenta is delivered or the baby is in danger of taking cold, in which case the cord is tied and cut, the baby wrapped in a warm blanket, and external heat applied. Keep the patient quiet and warm. Make no effort to deliver the placenta. The nurse sits beside the patient and makes sure the uterus is well contracted by resting the hand lightly on the fundus. Do not massage the uterus unless there is extensive hemorrhage; in addition, the nurse may

elevate the foot of the bed; otherwise do not disturb the patient, but await the arrival of the attending physician. The nurse may wait, in the absence of hemorrhage, at least one hour without endangering the mother or child. *Prenatal care*—Enter home and introduce self by name and Association. Learn patient's physical condition. Give advice concerning personal hygiene, diet, exercise, clothing, etc. Ask to see layette and instruct to make, if necessary. Instruct regarding supplies for delivery. Take T. P. R. before leaving. Contact physician for orders, including his approval of general directions. Use form letter. *Postnatal care*—Usual routine in home. Give general bath and care before local bath. After general care or bath is given, wash hands and prepare for local bath. Make solution of lysol—one quart of water to one dram of lysol. Cotton as necessary. Scrub hands. Give local bath. Apply binder and pads. Make bed. Visiting nurse should instruct attendant as to general nursing care. *For the baby*—Dressing the cord, P. R. N. Oil and bathe. Observe eyes, and inquire particularly about urine and stools. Instruct attendant to watch cord closely for bleeding.

A House for the County Society.—Where possible, every county medical society should own its home. There are so many advantages associated with it, that every endeavor should be made upon the part of the membership to put it over, even if it requires going into debt to do so. We extend best wishes to the Lycoming County Medical Society on its endeavor, and urge all of its members to bend every effort to assure a home for their County Medical Society before the end of 1927.

MEDICOLEGAL AND LEGISLATIVE NEWS

Contracts with Denominational Hospitals Unconstitutional.—A State Supreme Court decision, written by Justice Kephart, has recently been handed down which enjoins the Auditor General and the State Treasurer from paying to St. Agnes Hospital, Philadelphia, the sum contracted for by the State Department of Welfare in return for service rendered to the sick poor of the commonwealth.

An outline of this case and questions involved was published in the Atlantic Medical Journal for September, 1926, page 879. Those who are interested in the case are referred to this article for fuller information.

The Act of April 13, 1925, appropriated to the State Department of Welfare the sum of one million dollars to be distributed by the Department to various hospitals of the State for the care of the indigent sick or injured on a per-diem basis of three dollars per hospital day. Among other institutions, St. Agnes Hospital was chosen by the Department to participate in this appropriation.

The Pennsylvania Anti-Sectarian Appropriation Association sued to prevent payments from the State Treasury on the ground that St. Agnes Hospital is a sectarian instituition, and the Constitution expressly forbids appropriations for charitable, educational, or benevolent purposes to such organizations.

The Dauphin County Court rendered a decision that the hospital is a denominational institution conducted by the Catholic Order of the Sisters of St. Francis, and cannot constitutionally receive any State appropriation, and the case was appealed to the State Supreme Court.

Justice Kephart's decision reviewed the constitutional provision, and cited the four contentions of the appellants, which were, in short: (1) That care of the indigent sick and injured is a governmental function, and cannot be classed as charity. (2) That the Department of Welfare is an agency of the Government, and appropriations may lawfully be made for charitable purposes where the Department has discretionary powers under the act to select the hospitals to spend the money, even though they are sectarian. (3) That the Constitution does not prohibit a governmental agency from contracting with an interdicted institution. (4) That St. Agnes Hospital is not sectarian. The Court's decision on each of these points may be summarized as follows:

(1) Care of the indigent sick and injured is not within the class that may be called an obligatory duty or function of the State. Even assuming that it is so, where educational, charitable, or benevolent purposes ground the gift, the constitutional provision must be considered.

(2) The mere fact that the hospitals to be elected are left uncertain by the act does not eliminate the constitutional prohibition. The appropriation is not in reality to the Department, but to non-State-owned hospitals generally. The moment a denominational institution is selected, such selection has the effect of writing into the act the hospital thus chosen, to the same effect as though an appropriation had been made to it direct. This is a change of method only, not a change in the character of payment.

(3) The Constitution prohibits contracts with sectarian or denominational institutions, associations, and corporations where the basic subject matter is founded on an appropriation for charity and benevolence. To the extent of the appropriation, the institution is enabled to function as a sectarian institution, and on the people's money. Neither the individuals, on the one hand, nor the legislators, on the other, can set up a fictitious body to conceal the real purpose of the appropriation. The act gives no right to purchase "service," but is to pay for "treatment and maintenance of the indigent sick and injured."

(4) It is a rule that the findings of fact of a chancellor, supported by competent evidence, or drawn by inference from such evidence, has the effect of a verdict of a jury. The findings of the Dauphin County Court are therefore sustained.

"In conclusion we may say that it is immaterial whether the institution receiving the money is to be benefited or profited or whether in fact such money merely replaces what is actually used in caring for this class of citizens.

"After careful consideration, the assignments of error are overruled and the decree of the court below is affirmed, at the cost of appellants."

The Legislature of 1927 did not make any lump-sum appropriation to the Department of Welfare. Only appropriations to definitely named institutions were made at this session. Payments are therefore not being continued under this system by the Department at the present time. The constitutionality of the lump-sum appropriation was not decided by this case.

New Income Tax Ruling.—The compensation received by a medical director of a state or county hospital is no longer exempt from income taxes, under a ruling just announced by the Income Tax Department, according to M. L. Seidman, tax expert of Seidman & Seidman, Certified Public Accountants. "Heretofore,"

Mr. Seidman explains, "the law used to be that a medical director in the position mentioned need not pay any income taxes on his compensation since he was a state employee or the employee of a subdivision of a state, and the salaries of such employees were exempt from tax. Under the 1926 law, the further requirement was added that the employment be in connection with an essential governmental function. It is now held by the Income Tax Department that operating a hospital is a proprietary rather than a governmental function, and hence the Department concludes that the compensation of a medical director is subject to tax under the present law. The probabilities are that this ruling will be contested, for there is serious doubt whether conducting a hospital is purely proprietary. The contention may be made that the state wishes to safeguard life as well as property, and maintaining a public hospital could therefore be regarded as an essential governmental function."

Municipal Milk Ordinances.—The Supreme Court recently handed down a decision holding legal an ordinance which requires milk used within the city limits of Lancaster to come from cows free of tuberculosis. A total of 874 cities and towns in the United States have ordinances requiring the tuberculin-testing of cattle furnishing milk for consumption, while 375 provide an option between tuberculin-testing and pasteurization, according to *Pennsylvania Progress.* Fourteen states have enacted laws or issued regulations authorized by law requiring the tuberculin-testing of cattle. In all cases, tuberculin tests must be applied by approved graduate veterinarians.

PUBLIC HEALTH

Program of the Eighth Pan-American Sanitary Conference, Lima, October 12-20, 1927.—The Seventh Pan-American Sanitary Conference, held in the city of Habana from the 5th to the 15th of November, 1924, designated the city of Lima as the place for holding the Eighth Conference. The Government of Peru has accepted such designation, and in accordance therewith has sent an invitation to the countries of America in order that they may appoint delegates to this conference, which will be held from October 12 to 20 of the present year. The provisional program is as follows:

Consideration of the modification of the Pan-American Sanitary Code in accordance with the following suggestions and recommendations:

(*a*) That the interchange of information in so far as it relates to copies of laws and regulations pertaining to health and sanitation he made obligatory instead of facultative as in paragraph (*d*), article 1.

Art. 1, Par. (*d*). *The stimulation of the mutual interchange of information which may be of value in improving the public health and in combating the diseases of man.*

(*b*) That the last clause of article 4 be considered as referring only to such unnamed diseases as may exist in epidemic form.

Art. 4. *Each signatory Government agrees to notify adjacent countries and the Pan-American Sanitary Bureau immediately, by the most rapid available means of communication, of the appearance in its territory of authentic or officially suspected case or cases of plague, cholera, yellow fever, smallpox, typhus fever, or any other dangerous contagion liable to be spread through the intermediary agency of international commerce.*

(*c*) That the term "adjacent counties" as used in article 4 above he considered to mean all signatory powers.

(*d*) That article 15 of the Code be made immediately effective.

Art. 15. *The Pan-American Sanitary Bureau shall prepare and publish standard forms for the reporting of deaths and cases of communicable disease, and all other vital statistics.*

(*e*) That article 26 of the Code be made immediately effective.

Art. 26. *It shall be the duty of the Pan-American Sanitary Bureau to publish appropriate information which may be distributed by health officers, for the purpose of instructing owners, agents, and masters of vessels as to the methods which should be put in force by them for the prevention of the international spread of disease.*

(*f*) That smallpox be added to the list of diseases named in article 29 of the Sanitary Code, and that the words "or other pestilential disease in severe epidemic form" be omitted.

Art. 29. *An infected part is one in which any of the following diseases exist, namely, plague, cholera, yellow fever, or other pestilential disease in severe epidemic form.*

—*Public Health Reports,* July, 1927.

Mental-Hygiene Leaflet.—The New York State Federation of Women's Clubs is sending to the various clubs in the state a leaflet containing the following questions:

DO YOU KNOW

(1) That the mental health of a community is as important as its physical health?

(2) That mental hygiene concerns itself with the ways and means, the rules and regulations that are necessary to normal behavior?

(3) That mental hygiene is as much concerned with the smaller deviations from normal behavior as with insanity?

(4) That adjustment is the most important thing in mental health, and that the ability to adjust depends greatly on early training in the home and in the school?

(5) That the symptoms and warnings of mental disturbance and maladjustment may be recognized easily in their early stages?

(6) That education is the main factor in the fighting of mental disorders?

(7) That there are different degrees of mental health, just as there are varying degrees of physical health?

(8) That a large number of persons with mental disturbances are being cured today and restored to health and normality?

(9) That a large percentage of mental disease is clearly preventable?

(10) That you should have surveys made, lectures given, and conferences arranged for your community?

—*Mental Hygiene Bulletin.*

A Year's Work in Blindness Prevention.—The tremendous strides which have been made toward elimination of the principal causes of blindness in the eighteen years since the origin of the movement for the conservation of vision are revealed in the annual report of the National Committee for the Prevention of Blindness which has recently been sent to its 20,000 members.

The report entitled "A Year in Review" shows that the percentage of children in the schools for the blind who lost their sight because of ophthalmia neonatorum —for centuries the principal cause of blindness—has been reduced more than 51 per cent during the life of the Committee. It announces the establishment of the country's first preschool eye clinics for the examination of the eyes of children too young to read, and describes how in these clinics it has become possible to test the sight of children as young as two to six years.

The report shows that in 1913 there were throughout the United States only two sight-saving classes for the education of children with seriously defective vision; that in 1926 there were 265 such classes; but that this is only 5 per cent of the number of such classes needed to provide education for children with serious eye defects without further endangering their sight. More than 4,700 additional sight-saving classes are needed, according to the Committee.

In charts based on the experience of several of the largest industries of the country, the Committee reports

that well-organized sight-conservation work has made it possible for these companies to save 99 per cent of the expense previously incurred through eye accidents and to save 92 per cent of the time previously lost as the result of eye accidents. Notwithstanding these accomplishments in some plants, the Committee says "hundreds if not thousands of eyes and millions of dollars are still lost annually because of the eye hazards of industrial occupations. Any permanent reduction of these hazards calls for the provision and use of mechanical safety devices, the provision of adequate lighting and sanitary facilities, and the continued education of employers, employees, and governmental officials."

In a foreword to the report, William Fellowes Morgan, president of the Committee says: "The underlying cause of blindness, whether it be the result of disease or accident, is usually ignorance. The work of the National Committee for the Prevention of Blindness is, therefore, concentrated largely on pointing the way. Its function is to keep abreast of the scientific advances in medical and pedagogical knowledge and to inform the public in layman's language of such advances and how they may be applied practically in preventing blindness and in saving sight."

The Committee is to be congratulated on the work accomplished during the past year.

Smallpox Appears in Malone.—Ten cases of smallpox recently occurred in a family in Malone, N. Y., according to a report received by the State Department of Health. The first patient, a girl of 19, had been exposed to a probable missed case, infected in Ogdensburg. Her onset was on April 20, and the remaining nine in this family on May 8. No physician was called for any of the cases, but the county nurse became suspicious and reported them to a physician who in turn reported to the health officer. None of the family had been vaccinated with the exception of the father, who had not been vaccinated since childhood. There were a number of known contacts. Following certification by the State Commissioner of Health as to the presence of smallpox in Malone, about 2,000 persons have been immunized against the disease.

It is interesting to note that the first smallpox case in the recent outbreak in Ogdensburg was also found by a nurse.—*Health News.*

State Cancer Hospital.—The Massachusetts State Cancer Hospital at Norfolk, Mass., was opened June 21st, and is, we believe, the first state institution of its kind in this country. Dr. George A. Soper, managing director of the American Society for the Control of Cancer, speaking at the opening exercises, estimated the annual economic loss from cancer in America at $1,250,000,000, and predicted that "the Massachusetts crusade will be watched by the whole world."

Bureau of Dental Health.—The State Board of Health of Kentucky, through its newly created Bureau of Dental Health is announcing the beginning of a campaign for preventive dentistry. In seeking good health, physicians are especially interested in this development because preventive dentistry controls many phases of the general subject. The skill of mechanical dentistry can be taught to any good mechanic, but the science upon which the art is based is a much broader field. As dentists and doctors learn that their work helps to keep perfect the highest form of life, the human race, they will become more and more interested in preventive dentistry amongst the other fields of preventive medicine. The director of the new Bureau well says, "Real dentistry stands for more than dollars, and when we do good for others we really do best for ourselves, mentally and spiritually. We, as a profession, must find a real solution for dental health.—*Kentucky Medical Journal.*

Summary of Provisional Birth, Death, and Infant-Mortality Figures in the Birth-Registration Area for 1926.—The Department of Commerce, Washington, D. C., announces that birth rates for 1926 were lower than for 1925 in 26 of the 28 states for which figures for the two years are shown in the following summary. The highest 1926 birth rate (26.4 per 1,000 population) is shown for Florida, and the lowest (14.2) for Montana. Death rates for 1926 were higher than for 1925 in 23 of the 28 states shown for both years. The highest 1926 death rate (15.3 per 1,000 population) is shown for Florida and the lowest (7.8) for Montana. Infant-mortality rates for 1926 were generally higher than those for 1925, as 21 of the 28 states show higher rates in 1926. Delaware had the highest 1926 infant-mortality rate (92.9), while Oregon had the lowest (51.6). Infant mortality rates are shown for both years for 48 cities of 100,000 population or more in 1920. For 27 of these cities the 1926 infant-mortality rates were higher than those of the previous year, the highest 1926 rate (107.4) being for Richmond, Va., and the lowest (38.7) for Portland, Oregon. The above figures are exclusive of Idaho, Massachusetts, Mississippi, North Carolina, Utah, and Vermont, from which states complete transcripts for 1926 have not been received.

HOSPITAL ACTIVITIES

College of Surgeons Announces New Services for Field.—The American College of Surgeons recently announced two developments in its program of service to the hospital field that will be of interest to all of the hospitals of the United States and Canada. The college soon will set up a hospital research division. The findings will be made available to the entire field without charge. In addition, the college will investigate individual problems, as opportunity warrants, upon request of an institution, the institution in such cases, however, defraying the cost of such studies and receiving an individual report. The other development is the establishment of a moving-picture division where films made under the direction of an expert representing the college will be prepared, dealing with many phases of hospital administration.—*Hospital Management.*

Removal Announcement.—The Hospital Library and Service Bureau, maintained by the American Conference on Hospital Service, a super-organization originally planned to prevent duplication of the work of various organizations serving the hospital field, on July 1 changed its quarters to the American Hospital Association building at 18-20 East Division Street, Chicago.

Does Your Annual Report Unnerve Patients or Harm Nurses' School?—The 1926 report of the American Hospital Association committee on accounting and records, which is printed as a separate bulletin as well as part of the transactions of the convention of that year, gives a detailed outline of the objects of an annual report. The Committee lists eight objects of an annual report: (1) As a public report to the community of the institution's activities, both financial and professional. (2) As a permanent record to boards

of trustees, auxiliary committees, and other supporting bodies. (3) To serve as a basis for allocating subsidies in committees operating under a community chest or similar subsidy plan. (4) As a public recognition of contributions or donations, etc. (5) As a permanent record and public acknowledgment and recognition of the service of the various professional men and women connected with the hospital. (6) To convey to the medical profession in general information concerning professional services rendered. (7) To convey information to other allied groups, such as nurses, social workers, dietitians, etc., concerning such hospital activities as are of interest to them. (8) To convey information to the hospital and public-health fields concerning the activities of the hospital and for the purpose of comparison. To these purposes hospitals have added two others, judging from their reports. These might be classified as: (5a) As a means of informing patients of regulations, charges, and practices of the hospital. (5b) To convey information concerning the school of nursing to young women, their parents, and others.—*Hospital Management.*

Fifty-Bed Hospital Cares for Children at Michigan State Public School.—The administrators of state schools and similar institutions will be interested in a description of the new hospital building in operation at the Michigan State Public School, Coldwater, Michigan. The hospital building is of brick, two stories in height, and has a rated capacity of 60 beds, but in emergencies it has comfortably accommodated as many as 68 patients. While intended primarily for the children in the school, it occasionally will care for an employee. The hospital has a large orthopedic service, comparatively speaking, and has set aside a ward on the first floor for this type of patients. There are four small private rooms used as a contagious ward, and it can be completely separated from the rest of the hospital. When there are no contagious diseases being cared for, these rooms are used as private rooms for children who may be seriously ill. The hospital building also provides for rooms for two graduate nurses, and the remainder of the nursing staff live outside of the building. Other special features of the hospital are an operating suite, a well-equipped x-ray room, and a laboratory. In the x-ray room also is a quartz light. A dental dispensary and a medical dispensary are other departments.—*Hospital Management.*

How are Hospitals to Obtain These Millions for New Buildings?—In the January issue of *Hospital Management,* there was a reference to a report by the Architectural Forum, New York City, that hospital construction totaling some $272,000,000 was in sufficiently developed stages of progress to justify the assumption that it would be completed during 1927. An interesting question naturally presents itself at this stage, and that is, "Where will these millions of dollars come from?" In a great majority of instances there is no reason why the public served by a particular hospital should not contribute every cent of the funds needed. A number of years ago, at a convention of the American Hospital Association, a speaker asserted that if a hospital were really doing effective work, and if it really needed funds for expansion, these funds would be forthcoming if the public were properly approached.

The profession of raising funds for hospitals has for some time been past the stage where an organization seeking to serve an institution would be accepted without an elaborate inquiry into the ability, honesty, and successful experience of the organization. Like every other business or profession, fund-raising has seen a number of the "fly by night" and unethical individuals and groups fall by the wayside, while the organizations that set up high standards in their dealings with the institution and with its public have survived and grown. Today, consequently, hospitals desiring funds for any necessary purpose have at their disposal a number of organizations with records of honest business dealings and highly satisfactory results. These organizations cannot guarantee results any more than a hospital can guarantee the successful recovery of every patient who seeks treatment. But just as the physician's diagnosis and study will indicate to a relative degree of certainty the probable length of stay of the patient, and the ultimate outcome of the treatment, so can experienced fund-raising organizations diagnose the community and the hospital, and predict very closely whether or not the proposed campaign will be successful, or what can probably be accomplished, and whether or not conditions justify a campaign.

The advantages of a properly conducted campaign for funds are manifold. In many cases the value of the educational work that is a necessary part of the well-conducted campaign offsets even the amount of funds obtained, and there are as many cases where the goal set by the hospital has been surpassed as where the goal was only approximated. In other words, the educational and publicity campaign that is an integral part of fund raising, has been proved to be worth in itself the cost of the campaign, although this is not always realized by the hospital. The well-conducted drive for funds not only gives the citizens of the community a new, and in many cases a rather startling, idea of the importance of the hospital, and of the personal responsibility of each citizen to the hospital, but it develops a large number of new donors. From the purely financial aspect, of course, the value of a drive for funds lies in the amount of money obtained at a fixed cost below a possible commission for negotiating a loan and the first year's interest.—*Hospital Management.*

Are Names Desirable?—A hospital recently received a check for free bed work from a person in a distant state who had received a copy of a monthly bulletin, and with the donation came a note complaining that the reader had been unable to find the name of an individual, preferably the treasurer, connected with the hospital, in whose name the check could have been made out. There undoubtedly are many other readers of hospital literature who take the same attitude and who desire to correspond with individuals rather than with institutions through the hospital administrator, and later issues of the bulletin will bear the name of the president, the superintendent, and the corresponding secretary. On the other hand, there are certain institutions, and groups, such as chambers of commerce, that approve charitable organizations, which request that checks be made out in the name of the organization or institution. Perhaps it is best to give both the name of the hospital and the name of one or more individuals, and thus satisfy everybody.—*Hospital Management.*

New Hospital Publication.—Volume 1, No. 1, of *Hospital News,* published by the Miseriocordia Hospital, Philadelphia, recently appeared. It consists of eight pages, and affords much interesting reading matter for the community it serves, and is filled with advice in various forms that will prove instructive to prospective patients. It also contains articles that will

enlighten its readers regarding hospital needs and show them how they may be of practical help. There is a well-written article entitled "Hospital Charges Have Nothing to do With Fees of the Physician," a subject so frequently misunderstood by the laity. We congratulate the hospital on this most satisfactory issue.

INDUSTRIAL MEDICINE

Visual Acuity and Color Perception of Railway Employees.—The periodic reëxamination of employees in the train service does not seem to have been given very serious consideration by the majority of the railroad companies, although the chief surgeons of the companies have recommended and suggested it to the management for a number of years. It is quite obvious that it should be done by every railroad, not only from a standpoint of safety to the traveling public and to the employees themselves, but also from a standpoint of financial economy; i. e., property damage and loss through wrecks. For color testing the Jennings modification of the Holmgren test is the best method of examining the color sense of railroad men, for the following reasons: (1) The man himself makes a permanent record of his color sense. (2) It is quick and accurate. (3) The worsteds are not soiled by handling. Only one skein became soiled in the examination of over 2,000 men, and it was a very delicate pink. (4) The examiner himself cannot make a mistake, even if he is color-blind.—Hugo Reim, M.D., *American Journal of Ophthalmology,* June, 1927.

University Course in Industrial Medicine.—McGill University, Toronto, is seriously considering the establishment of a new Department of Industrial Medicine, which is now being tentatively organized in connection with a clinic for industrial diseases at the Montreal General Hospital. By this arrangement the skill of the medical faculty will be brought to bear upon the healthful regulation of industrial establishments. Expert advice on all health topics will be available to the management, and all forms of preventive medicine will be practiced in behalf of the worker. The object of the department is to bring the entire field of industrial medicine and preventive health work into closer and more valuable contact with the medical profession.—*Hospital Management.*

REPORT OF MEETING OF THE TRI-STATE MEDICAL CONFERENCE

The meeting of the Tristate Medical Conference was called to order at 10 a.m., June 18, 1927, at the Hotel Casey, Scranton, Pa., by the president of the Medical Society of the State of Pennsylvania, Dr. H. W. Albertson.

Those present from Pennsylvania were: Dr. H. W. Albertson, president, Dr. Arthur C. Morgan, president-elect, Dr. Walter F. Donaldson, secretary, and Dr. Frank C. Hammond, editor.

Dr. H. W. Albertson: These conferences have been of great value, to the Pennsylvania Society, at least, and I personally feel particularly indebted to the Conference for the many ideas that have come to me in this work. An interchange of ideas of the neighboring states is one of the best things we can have. Our work is so closely allied, and there is so much we can learn from one another and use to our own advantage that I feel they are very well worth while.

Dr. Frank C. Hammond, Philadelphia Pa., chairman, Committee on Lay Education, Medical Society of the State of Pennsylvania: The Education of the Public in Medical Matters.—Without doubt one of the greatest endeavors of a state medical society is the education of the lay public on medical matters. Public education has two branches: first, the education of the medical profession, and second, the elementary education of the lay public. To the medical profession, assisted by the educated lay public, there should be intrusted the duty of instructing the mass of the people. This can be accomplished by a thoroughly organized plan under the auspices of the state medical society. This matter of lay education is not so simple as it might seem. It is an art to be able to repeat over and over again the same thing to the public in just a little different language. Medical ethics, a strong weapon of conservatism, has been the greatest block to publicity.

The public consumes an enormous quantity of misinformation and near facts regarding health culture and popular hygiene. It is a general complaint among educated classes that sound information and advice are difficult to secure. Hence it is up to the state medical society, in a thoroughly organized manner, clearly and scientifically to instruct the medical profession and the public, and no adverse comments can then be made.

Dr. Wendell C. Phillips, president of the American Medical Association, at the annual session of the Association May 16-20, 1927, urged continuous attention to the education of the public in matters of health. He suggested a proper system of censorship to safeguard medical publicity.

On recommendation of the Judicial Council of the American Medical Association, the opinion was adopted that all articles of an educational nature on medical or health subjects intended for the lay press or lay audiences should give expression to the consensus of opinion of the medical profession rather than to personal views, and that such articles should appear preferably under the auspices of the American Medical Association or one of its component county societies or constituent state associations.

The president of the Association appointed a committee to act on public responsibility, having to do with the relationship of the medical profession to the public.

The House of Delegates of the A. M. A. also adopted a resolution whereby the Board of Trustees of the A. M. A. will prepare approved forms of letters or literature to be sent out by county medical societies to the public to promote the value of periodic health examinations, and information that the examinations can be made and records kept by qualified physicians who are members of the American Medical Association, in this manner hoping to circumvent the harmful advertising activities of commercial agencies dealing with periodic health examinations.

Outline of Lay-Educational Activities

1. Organization: Work directed by Committee on Lay Education, or Committee on Public Relations, with coöperation of central office of the state medical society. (1) Producing organization. (a) Every county society requested to appoint a committee on lay education or public relations to help secure speakers and distribution. (b) Direct solicitation by officers, committee, and office of possible contributors—financial, speakers, or

writers. (2) Distributing organization. (a) Committees of county societies. (b) Connection with one or more newspaper syndicates. (c) Connection with lecture bureaus and chautauqua committees. (d) Direct contact with lay and other professional organizations. (e) Direct contact with school authorities. (f) Coöperation with state educational and health departments.

2. Media of publicity: Newspapers (distributed direct and through syndicates and county societies); magazines (distributed through agencies or direct); labor organizations; fraternal organizations; ministerial organizations; men's clubs and service organizations; women's clubs; churches; radio; movies; stores; libraries; schools and colleges; trolley cards; industrial corporations; coöperation with insurance companies; inauguration of "Health Week" by county medical societies; health-examination clinics in connection with "Health Week"; county fairs and other exhibits; state farm show; coöperation with Antituberculosis Association, welfare federations, cancer and heart associations, and any health organization; coöperation with state, county, and city health departments; coöperation with nurses, druggists, and dentists associations; inauguration by county societies of permanent health-examination clinics; coöperation with hospitals and hospital associations.

3. Methods of Propaganda: Articles for newspapers and magazines; circulars distributed through labor and other organizations; posters displayed in stores, factories, and libraries; circulars supplied druggists and stores to wrap with packages, and to libraries to place in books as markers; manuscript of radio talks supplied to radio companies as "fillers," in addition to arranging for radio talks by physicians; securing health films and arranging to have them run by local picture houses; providing attractive trolley cards, and either securing donations of space or paying for it as necessary; health talks to employees of industrial concerns and stores; providing speakers to lay organizations; preparation of outlines of talks to be supplied speakers, or of manuscript to be supplied to club members who will volunteer to read them; survey of health courses in schools; preparation of ideal health courses; effort to secure introduction of such courses in schools throughout the state in coöperation with state educational department; same in colleges of state.

4. Subjects for propaganda: Diptheria immunization; smallpox vaccination; typhoid inoculation; periodic health examinations; health habits; avoidance of epidemics; stream and water-supply pollution; cleanliness and civic health; child health; sunshine and health; diet; et cetera ad infinitum.

5. Benefits to people: Better health; replacing of popular superstitions regarding health by better comprehension of scientific facts; better understanding of the aims of the medical profession.

6. Benefits to profession: Constructive combating of cults; greater prestige of profession; more sympathetic reception of medical legislation; less need of combating destructive legislation; increase of health-examination work, and building up of practice in preventive medicine.

The Illinois State Medical Society undoubtedly has the most thoroughly organized system of lay education. In order to finance this field and other work they increased their pro rata from the county societies from $5 to $8. In 1926 it cost $2.86 per member to carry on this work.

The basic aim of their Lay Education Committee is (1) To make clear the meaning and teach the necessity of the single standard of medicine. (2) To teach preventive medicine, toward which they believe the periodic health examination (medical and dental) is the greatest single step. (3) To achieve a high degree of efficient teamwork in health programs with all agencies that are interested in any phase of health work. (4) To establish in communities scientific activities under medical leadership of all lay movements for health. (5) To hold back in every possible way state medicine in every form, and prevent all legislation toward that end, this being done through the component county societies assuming their responsibilities. The end results are in direct proportion to what is paid by members. They started this work by popular subscriptions, about 22 per cent of their membership contributing $13,000. Then they increased their assessment from $5 to $8 to carry on. They have a woman who is a full-time director in charge of the office of the Lay Education Committee.

"From the record of successes and failures in Illinois during the past two years, certain recommendations can legitimately be made for the greater appropriateness of further educational work to the needs of the people. (1) We must focus more intensively upon the child. Too much of the speaker's work, in particular, has been directed to adult audiences, less susceptible to a modification of customs and prejudices. (2) We must relate more closely the programs of lay education to the regulation business of the society. Their cost to the society is about $2 per capita of the $3 raise in annual dues authorized at the 1925 meeting. No matter what their influence upon the lay mind in general, they must be made an integral part of all county society work if they are ever to be justified in the mind of the individual physician. (3) We must make a direct effort to cut mortality rates. Nothing to the lay person will more quickly differentiate this movement from selfish propaganda and will more readily gain good will and coöperation for it. Those of you who have watched the development of lay-education work know that this was the purpose of its sponsors from the beginning. We must make this purpose more obvious. (4) We must direct more attention to the unorganized groups. (5) We must equalize the amount of service now being rendered in the state in order that each county may receive its just proportion—whether the county society takes the trouble to ask for it or not. The unorganized medical man is a menace. There is abundant evidence that the weak county medical society is a deficit to any community, and a strong medical organization its greatest contribution to economic soundness and good American citizenship."

We have not launched a plan of lay education in Pennsylvania, but we believe it is a most essential activity for our State Society. We have given much thought to its organization and adoption, and it will require much diligence and application on the part of those concerned to carry it to successful fruition. It will require financial support. We hope by the end of the year to have established ways and means for its consummation.

Dr. James E. Sadlier, Poughkeepsie, N. Y.: I feel, as you gentlemen do, that education, both to the physician and to the public, along the lines of public-health instruction is one of the paramount and important things of the times. In New York State we have at the present time in process of development a plan whereby organized medicine, the State Department of Health, and lay organizations can be so combined in their action and can so coöperate that we can instill into the

membership of the county societies and the medical fraternity of the state proper ideas along the line of education in public health matters. Along those lines we have developed what is known as our Public Relations Committee. Our program is to go out now into the county societies and organize in each county a separate public relations committee which shall be under the jurisdiction of the parent committee, under the leadership of the county medical society and of the lay organizations in that particular county, together with State health organizations which will, of course, be associated with them. They will have a composite committee which will work for the common good and bring the medical men who are apathetic upon this question up to the proper standard, to get them actively working and also to coördinate the activities and eliminate the dysfunction which is an economic waste and which has existed in all times past. We are hoping for a great deal from this committee with its auxiliaries in the county societies, but we recognize that it is going to be a rather slow process. It will take a long time to get it actively working, but that it is progress in the right direction we feel quite assured.

I was surprised to note how absolutely the question of periodic health examinations has fallen down in our State. We are talking and writing about it and having practical lecture courses, especially in the larger cities of the State, and doing all that we seem to be able to do to get it across, and yet we are actually accomplishing very little outside of one or two institutions. The medical man, the family physician, is actually doing almost nothing. In trying to analyze the reason for this, it would seem that what little work is being done is by a group who are not the younger men in the State Society. This question of periodic health examinations would impress one that it is really an office of the younger physician. The young man should take up this work, make a study of it, and carry it into practice. The consensus of opinion at a meeting held to discuss the subject was that we are not doing enough to instruct our coming medical men in their duty in public health matters, in regard to periodic health examinations, etc.

I have in mind one activity for the coming year: to get together the men of the various colleges in the State of New York and, in association with some of our leaders, have a very definite talk with them along this line of public health and periodic health examinations to see if we cannot instill into the minds of these young men before they go out into the actual field of medical work, the idea that medicine is more than a definite treating of established disease, that preventive medicine should go along with curative medicine, and thereby get a group of younger men coming up who will carry on this work.

The House of Delegates of the New York State Society authorized the organization of a Woman's Auxiliary. We are going to take that matter up this year. Personally, I feel that by such an organization we can reach out into the homes in a better way than by any method we have at hand.

Nothing pleased me more than to hear the splendid paper this morning by Dr. Hammond relative to what is going on in the State of Illinois. I talked with one of their speakers who had been out over Illinois educating the medical men and the lay public on the question of nose and throat hygiene, and it seems to me that we have something to learn from this State. I do not wish to place any other State in advance of the three that are represented here today, but I do think that we can learn a great deal along the lines of education of the public in the matter of health from what they are doing in Illinois. They certainly have a state-wide program, and better still, have an enthusiasm that is simply marvelous. If we can only get some of their psychology and enthusiasm we can put over a very nice program in our three States.

Dr. Walt P. Conaway, Atlantic City, N. J.: This matter of furnishing medical education direct to the public is one of the newer activities of county and state medical societies, which is deserving of careful consideration at this time. I quite agree that radio talks direct to the public, under the supervision of the county medical societies is a most efficient method. In some states considerable money is being spent for this purpose. The Medical Societies of the States of Illinois, Wisconsin, and Texas are, I believe, the leaders at present in this work. The Medical Society of my own State of New Jersey, while in hearty sympathy with this movement, has as yet spent comparatively little money in this work. Since October, 1925, Dr. Reik, who is the editor of our State Journal as well as executive secretary of our State Society, has devoted a goodly portion of his time to education of the public concerning medical matters. In addition to arranging for a series of ten-minute talks on "Keeping Well" which are broadcast weekly by different members of our local medical society, he has spent considerable time throughout the State addressing Rotary, Kiwanis, and other business men's clubs, as well as giving talks before Y. M. C. A. meetings and church clubs. A small booklet called a "Primer on the Relationship of the Physician to the Public" was also prepared by Dr. Reik, and five thousand copies were issued. We estimate that about $3,000 was spent last year by our State Society in public-education work.

At our annual meeting last week, the House of Delegates very generously gave permission for the appointment of an assistant to our executive secretary whose time shall be devoted exclusively to the public-education program at a cost not to exceed $4,000 annually, so while we have been expending approximately $3,000 per annum for the past two years, it is a fair estimate to say that for the next year our expenses for this work will be about $6,000. It seems to me most commendable in the physicians of our State to be willing to spend that much money from their own pockets to be applied to a program of instructing the public how to keep well.

Another worthy feature of our recent meeting was the decision of the House of Delegates to dispense with the maintaining of any lobbyists in the State House at Trenton during the session of the Legislature. We preferred rather to depend on the good work from our Committee on Educational Matters to try to instruct the members of the Legislature by correspondence whenever necessary regarding any proposed medical legislation. It seems to me that it is the duty of medical men, to assume leadership on all lay movements for the benefit of the public health. Some of the objects of a lay-education committee are in a sense to teach the public some preventive medicine and the necessity and importance of only a single standard of medicine, as well as to assist in achieving a higher degree of efficient team work in certain health programs. In this way such committees do a great deal to prevent legislative measures tending toward state medicine in any form.

Dr. Frank Overton, New York, N. Y.: This matter of education of the public is a thoroughly new thing in the county medical societies. Dr. Sadlier has called attention to the whole system of education in medical schools. They do not talk to the medical students at all about civic duties except in the briefest possible way during the course. It seems to me that the medical schools should have this brought to their attention. Dr. Sadlier suggested that the medical schools give talks on these problems, showing to students what their future relations should be. If we can bring that fact to the attention of the medical schools I think it will be a tremendous aid in our future work, because certainly at the present time the younger medical students have no conception of what the county societies do, and it is up to us to tell them.

Dr. H. O. Reik, Atlantic City, N. J.: I wish to speak on several of the points that were brought out: First, to commend to the New York State Society that they proceed with the organization of the Woman's Auxiliary. We have just organized one. They had their first annual meeting this year, and there is every prospect of their taking a very active part in the public-education program. We were a year behind Pennsylvania in this work, but are also a year ahead of New York, and that is a fair relative pace to keep.

There are two or three other states taking part in this public-education work besides those mentioned by previous speakers. Massachusetts has just engaged a secretary, and California is doing a great deal of work. California publishes a monthly periodical for the laity which is comparable to *Hygeia.*

I always like to get some concrete question before this body for action. Dr. Hammond discussed the presentation of radio talks and their censorship. One station in Atlantic City, WHAR, has been placed at the disposal of the New Jersey State Society. Station WPG has been placed very fully at the command of the Atlantic County Society, and there are weekly messages broadcast from that station. The county society selects its speakers through a committee, and the papers are presented to the committee for censorship before they are broadcast. They have used the name of the speaker, the local station rather insisting upon that. At Paterson, in Passaic County, N. J., they are putting on a series of talks under the auspices of the county society, and they avoid the name of the speaker, the talk coming out under the name of the county society. The thing that affects us is this: that in these talks the broadcasting which reaches the public of these states, is mainly in the hands of the Radio Corporation of America. They control all the big stations, and announcement was made some months ago in the press that they intend to appoint a board representing various professional interests to supervize what should go out over the air from their stations. I immediately asked Dr. Wendell C. Phillips to see that some physician was appointed to censor the medical material, because a good deal is going out from the cults. I don't know that anything has happened yet, but Major General Harboard was responsible, I think, for the issuing of that statement. Would it be appropriate for this group, representing the medical societies of the three states to communicate with him, asking that a member of the Supervising Censorship Committee be a medical man who shall act on medical matters to be broadcast?

Dr. J. B. Morrison, Newark, N. J.: I think this is probably the most important matter that will come before us, and I want to congratulate Dr. Hammond on his magnificent paper. I believe if this Conference did nothing else but deal with Dr. Hammond's paper we should accomplish much of the purpose that has brought us together. There is no subject before the public today so far-reaching as the subject of public-health education. I want to stress, and have you bear the message back to your societies, that probably the greatest feature we have to deal with is the education of our own men before they engage in the activities of this field. As we travel around in New Jersey we are discouraged by the attitude of the average physician toward anything of this type. It may be that this is a matter for education; that it is a matter of the physician's contact that does not take him out into the breadth of the world. It may be that the man who is a member of the Kiwanis Club gets a better education along this line than does the physician. At any rate, the physician often does not have the breadth of vision that is necessary to carry him on with the work. Therefore, we must employ our greatest efforts to get our opinions before those men and encourage them to develop such enthusiasm as is found at present in the State of Illinois.

The question is how to do this. It cannot be done sporadically. Two and a half years ago we were at sea about this in New Jersey. Illinois was starting. California had done some little work along this line. We in New Jersey had an insight into this and saw what the opportunities were, and we engaged a man to enter the field at what was then a considerable cost to us. I happened to be a member of the committee that chose Dr. Reik, and told him that we would not lay out any definite plan, but that we felt there was ample work for him to do and that the possibilities of accomplishment were great. The return coming to us from this expenditure has been enormous. I hear Dr. Reik's name mentioned, not because he is Dr Reik, but because he is the executive secretary of the society. This comes to us from the laity. He has traveled during the year over 20,000 miles in New Jersey and addressed between eighty and a hundred meetings. A great deal of the time has been spent on the county societies, and a great deal of it in contact with the public, and it is bringing enormous returns.

I am not discouraged about our work with the periodic health examinations. It is difficult to say just what has been accomplished, but in my own office, when eight to twelve people come in during the year desiring periodic health examinations we know that something has stimulated them to ask for the examinations. They do not go to the younger men, probably for the reason that they select the man who has had greater experience. The work is broadening, and I think the results are splendid. What the State Medical Society has done in this matter also deserves a great deal of thought. The contact that we are forming in New Jersey is broadening all the time.

This year we are going out with diptheria work, and it is showing us the necessity of a State-wide organization with the proper qualifications, not distinctly with a view to giving proper education to the public, but regarding the method of approach in order that we may broaden the contact with the medical profession and the public.

Dr. Arthur C. Morgan, Philadelphia, Pa.: A short time ago it was my privilege to address a county society in Pennsylvania meeting in a town where there was a college that gave a good premedical course. I

was delighted beyond expression to note sixteen pre-medical students in that society meeting who were present by invitation. These young men were being educated, in addition to their academic education, in the way to conduct a county medical society.

In response to the recommendations made by the American Medical Association relative to conducting periodic health examinations on all students in medical college, the school with which I am connected has that plan in force so that each medical student now will have received four periodic health examinations during his term of college study. This will be an actual practical presentation, with this man as the subject, and he will in turn be enabled to do these periodic health examinations himself in practice. A very important thing has been the finding among the student body of cardiac affections, of tuberculosis, of focal infections of various sorts which have been taken care of, so that these student-patients now have been individually aided, and there has been a moral effect upon the student body as this information seeps out among the members of the classes.

The Philadelphia County Medical Society adopted a by-law which provides for junior membership in our Society. The nominal fee of $5.00 per year is charged, and this includes men and women who are doing internship work in the hospitals after their graduation and before they have come up for the State Board examination and cannot therefore be made members in the regular manner of any county medical society. But by being made junior members they receive the weekly publication, all circulars, and receive a broad consciousness of the fact that they are already members of a county medical society. At a medical school commencement exercises two nights ago several young men said they wanted those blanks right away.

The Woman's Auxiliary in Pennsylvania has been a very material help to the State Society in carrying on its work. I shall speak later in regard to the aid they gave in legal matters, but I can tell you that the organization is eager to do work, and on every occasion when I have addressed them they have asked the question, "How can we serve you?" The answer has always been, "Follow us, but do not go ahead of us." That is, let their movements be circumspect and guided and, if you will, censored by the county society. They are accomplishing much good in lay education as well as in voting matters. I have also made this recommendation to the Woman's Auxiliary: do not try to replace or supplant other women's organizations that are already in existence in your counties. Coöperate with those societies already organized. But if there are none in existence, then it will be your place to act as pioneers in this matter of education of the laity. This point is being emphasized because every county auxiliary has a special committee appointed to secure subscriptions to *Hygeia*, and they are doing good work.

Dr. H. W. Albertson, Scranton, Pa.: We have had burdens aplenty but this one seemed easy. Last year at the Philadelphia session in my inaugural address, I made recommendation that a special committee be appointed to undertake this work. It was approved by the House of Delegates, and I appointed Dr. Frank C. Hammond as chairman of this committee. I am sure, from what I have heard today, that Dr. Hammond will have something worth while to bring to the Medical Society of the State of Pennsylvania at its annual session in Pittsburgh. I wish to say to all of the representatives present today and to other officials of the various states that we extend you a very cordial invitation to meet with us in Pittsburgh the first week in October.

Referring to the matter of news for the lay press: after several years as secretary of the local county medical society and editor of its bulletin, and being closely associated with the press, who are constantly asking for news, I found that it was a very difficult matter sometimes to give them the news which to my mind was news that the public should know, and keep from them the things which I felt were not news but gossip. This is one of the things which will have to be watched very carefully, as in the state and county societies efforts to get to the press the matter of news often terminates in giving them sensational matter which they would much rather have than the sort of material they should have.

Another question is the matter of diagnosis and treatment. They are very eager, when a paper is read along the lines of preventive medicine in regard to some particular disease, for more information along the line of diagnosis and treatment. We should try to stimulate the people to realize their condition and to consult their physician, not to make a self-diagnosis and give self-treatment which is often very wrong.

Another subject brought up in Dr. Hammond's paper is one about which I have been hearing a great deal in my visits to the various county medical societies during the year; that is, the periodic health examination of the preschool child. In Pennsylvania, certain health organizations have taken up the matter of examination of the preschool-age child on what they class as May Day, the first day or first week in May, and are trying to have all the children of preschool age examined by a physician. In certain communities there has been objection to this on the part of physicians because the work was said to approach state medicine. The physicians claim that there are plenty of people who are perfectly willing to take their children to a physician for examination but who are urged to take them to a clinic by the social workers. This subject has been much discussed in certain county societies, and I should like some expression as to what has been the experience of others in your different states.

As to the matter of periodic health examinations, I have always felt that first we must educate the physicians. It is rather common to have a patient ask for a health examination, and afterward tell you that he went to his own physician for an examination and was told to go home and not worry about his condition, that he was perfectly well. Until we can educate our own men to the necessity of properly conducting such an examination as outlined by the blank and of giving the patient proper service for the money which he has a right to charge, and which is always freely paid, we cannot expect very much from periodic health examinations. I am glad that Dr. Reik has taken up this matter in New Jersey and am interested to hear of their progress. I know that we could accomplish much more in Pennsylvania if we had a full-time executive secretary.

Dr. Conaway: On behalf of the Medical Society of New Jersey I should like to extend this body a cordial invitation to hold its autumn meeting in Atlantic City. This was approved.

Dr. Reik: May I ask if the New York representatives would be favorably inclined toward having this body pass a resolution requesting them to confer with the Radio Corporation of America regarding the appointment of a medical representative on their advisory council?

Dr. H. R. Trick: Would it be better to recommend to the American Medical Association that this be done?

Dr. Reik: It was recommended to the A. M. A. about a year ago. That is such a big organization and necessarily moves slowly. I think we should take some individual action.

Dr. Arthur C. Morgan: May I present a resolution: "RESOLVED, That the members of the Tristate Medical Conference, officially representing the State Medical Societies of New York, New Jersey, and Pennsylvania, do herewith instruct our secretary to present a letter to the officers of the Radio Corporation of America, expressing our opinions relative to the matter of lay education and recommending the appointment of an outstanding member of the medical profession on their advisory council." This resolution was approved.

Dr. Frank C. Hammond (in closing): There is no doubt we all agree lay education is one of the biggest problems the state society has to handle. We must educate the physician as well as the public. I learned that with the periodic health examination. Reference was made to proper instruction of the medical student and teaching him medical ethics. One of the medical schools in Philadelphia has had such a course for ten or twelve years in which stress is laid on the value of organized medicine and its far-reaching significance, and what it all means. We must instruct the student in regard to what he should do when he gets into practice.

The Philadelphia County Medical Society some time ago organized a plan of publishing an article each week in the papers, and in order to overcome the red tape regarding the code of ethics, etc., it was deemed advisable to have these articles appear under the name of the county medical society. Then later came radio broadcasting. A committee was appointed to conduct this. Certain members were requested to prepare articles and broadcast them, their names being announced. Some who were not invited to broadcast thought those who did were getting a lot of free publicity and advertising. To offset this, in the next series it was ruled that the name of the one delivering the address should not be given, simply announcing the subject and the name of the County Society. But the radio audience wants to know who it is talking to them, so that in the next series of broadcasting the names of the speakers were again announced. We must eliminate red tape and narrow-minded notions. We must come out in the open, preferably under the auspices of the state society and the county society, in order to put over this education propaganda.

Dr. Joseph S. Lawrence, Executive Officer of the New York State Medical Society: The State-wide Antidiphtheria Campaign.—Just about two years ago a number of leaders in public-health work in New York State began to discuss with their organizations the feasibility of protecting children against diphtheria. One powerful welfare organization at its annual meeting proposed that they undertake stimulation of the public to the advantages of proper immunization of young children. The president of the State Medical Society, appreciating the great public service that could be rendered by enlisting the medical profession in a campaign of immunization, invited representatives from the Department of Health, several voluntary organizations engaged in public-health activities, and the chairmen of the standing committees and other officers of the State Society, to confer on plans for promoting active campaigns of immunization. This conference was well attended and a great deal of enthusiasm was evinced by all toward the development of a state-wide campaign. Following this meeting a smaller committee representing the same organizations (namely, the Department of Health, the Department of Education, the State Charities Aid Association, the Metropolitan Life Insurance Company, and the State Medical Society) was organized as a working committee to develop a program. This committee has met monthly since December, 1925. Its first task was to ascertain what contribution each organization could make to the general program to coördinate these suggestions. This resulted in the preparation of a campaign handbook, in which was stated the general health problem which diphtheria presents, a brief review of what had been accomplished up to that time in the way of controlling diphtheria, and a general program for a five-year campaign of immunization. This handbook was printed and widely distributed throughout the State by the county committees on tuberculosis and public health, by the State Department of Health, and by the county medical societies.

The president of the State Medical Society wrote to the presidents of the county societies inviting their interest and urging that, at an early opportunity, they have their county society pass a resolution endorsing the campaign. The county societies responded very heartily and promptly. There was not a single objection registered to making such endorsement, and in many instances, the local society took steps to become an active factor in the promotion of a campaign in its district. Notable among these counties are Erie, Schenectady, Monroe, Broome, and Orange. The annual meeting of 1926 devoted an entire evening to the consideration of diphtheria immunization, when papers were presented by the president of the State Society, the Commissioner of Health of the State Health Department, and the Commissioner of the New York City Health Department. Each district branch, at its annual meeting, included at least one paper on diphtheria immunization as a part of its program; and in every instance, that paper proved to be one of the most interesting features of the program, bringing out more discussion than any of the other papers. The character of the discussion in every instance was favorable to the promotion of the campaign, and such criticism as was offered was invariably constructive.

Placards were prepared by the State Charities Aid Association, with the advice and approval of the working committee, for use in physicians' offices. These were distributed by the county committees on tuberculosis and public health or, in those counties where there was no such committee, a supply was given to a member of the county medical society who volunteered to make the distribution or, in some instances, the names of the physicians were forwarded to the main office of the State Charities Aid and pamphlets were sent to the physician by mail. A large, attractive billboard poster was prepared, the artists donating their services, the lithographers preparing the posters at cost, and the Outdoor Bill Posting Company posting them without charge. Approximately one thousand of these posters were used throughout the State, and more than five thousand placards were distributed to the physicians for use in their offices. Much publicity was given to the campaign both generally and locally.

The Governor was asked to make a statement, which was broadcast; the Commissioner of Health prepared several radiograms, and lecturers from the State Department of Health and voluntary agencies used every

opportunity for discussing before groups of parents the advisability and importance of having children immunized. Several insurance companies, among them the Metropolitan and the John Hancock, prepared pamphlets which they had distributed by their agents. The Metropolitan also prepared a moving-picture film, "New Ways for Old," which is distributed freely to communities through its own agents for use in the movie houses. It also stimulated its agents to have children in their own families immunized, and its record to date is one of which it has ample reason to be very proud.

The technic of immunizing children was widely demonstrated by representatives of the Department of Health before groups of physicians, either at the time of a society meeting or at demonstration clinics. Several pamphlets describing the technic were issued by county societies, and articles discussing the technic found a place in the columns of the State Journal and of the several county bulletins. Several county societies prepared placards of their own. There was some difference of opinion, naturally, between the professional and nonprofessional groups, as to the manner in which the campaign should be conducted. Three programs were outlined that had been carried out. The main difference between these types of campaigns probably can be summed up in this: that in Newburgh the aim was to get all of the children immunized as promptly as possible, and to do that the physicians were asked to contribute their services. In Schenectady and the other counties the aim has been to create a desire in the parents for the immunization of their children so that they will be convinced that immunization is necessary and secure it not only for the children of today, but for those who are still to become susceptible.

The difficulty with the types of program in which the county society has taken the lead, seems to be in securing the hearty coöperation of the physicians. They advocate that the immunization should be made by the family physician, but it is not at all an unusual reply to receive from family physicians that they do not care to bother with immunizing children, but send them to the health officer. One reason for this indifference may be a lack of familiarity with the technic of immunization. In Cattaraugus County, where a county-health-unit demonstration is in progress, physicians have been employed to immunize the children as they are collected by the nurses at centers, at the rate of 75c per inoculation. In Schenectady the physicians of the county adopted the following schedule of fees: $5 for the immunization of one child, $7 for the immunization of two children in the same family, and $9 for the immunization of three children in the same family. Some physicians are charging as much as $5 for each inoculation, making a total of $15 for the immunization. Others are charging an office fee for each injection.

The immunization of children of school age is comparatively simple, because they are already gathered in the school and it is simply a matter of getting the consent of the parents and having the immunization performed by the school physician. A special effort is being made to have the preschool children immunized. Several plans have been outlined for endeavoring to reach the preschool child. One is that the family physician should introduce the subject to his families, and some physicians have written letters to all of their families commenting upon the advisability of having the work done, and offering to do it at the parent's request. Another scheme has been to have the school nurses visiting the families urge that the children who are not of school age be immunized at the same time or subsequent to the immunization of those who are in school. But there is another method which probably has not been used so extensively as it might, and that is to have the subject of immunization be a part of the programs of all mothers' clubs or organizations in which parents, particularly mothers, are interested.

Dr. W. F. Donaldson, Secretary of the Medical Socity of the State of Pennsylvania, Pittsburgh, Pa.: When I received notice May 23d, that I was to report for Pennsylvania its progress in the antidiphtheria campaign, I assumed it was well-known by the chairman that I am not a public-health expert, and that I would be expected to report from the point of view of a general practitioner and an officer of a county and a state medical society. I therefore promptly addressed an appropriate questionaire to the secretary of each of our sixty-three component medical societies, to the chairman of the public relations committee in seventeen counties, to the county medical director (official representative of the State Health Department) in sixty-four of our sixty-seven counties, and to the health officers of ten cities, including Pittsburgh and Philadelphia. From my personal knowledge and from a review of the journals and reports at hand I note that the subject of permanent immunization of children against diphtheria was reported and discussed at our State Society meetings and various county society meetings in 1920 and 1921, but it was not generally and actively put into practice until 1923.

The questionaire reads as follows: What organization in your county has taken the greatest interest in popularizing the Schick Test and immunization against diphtheria? (Please record briefly methods used and results obtained.) (a) County Medical Society. (b) State health authorities. (c) Public school authorities. (d) Miscellaneous organizations.

To date we have heard from fifty counties, replies having been received from forty-four officers of county societies, from thirty-one county medical directors, and from seven city health officers. There has been favorable action in 70 per cent of county medical societies reporting, ranging from mere endorsement of the movement, individual contributions by members of time, volunteer services, addresses, newspaper articles, and special meetings with special programs, to the complete contribution given by the Cambria County Medical Society. There has been no action at all in thirteen county medical societies. In two counties, reports received indicate that the county medical society or its individual members took little or no action because the opinion prevailed that immunization should be entirely limited to the efforts of family physicians. Illustrative of the greatest contribution which may be made by a county medical society, I herewith quote extracts from the reply received from the Secretary of the Cambria County Medical Society, which has a membership of 163 physicians who practice in a county with a population of 217,628. Cambria is a mountainous county with some agricultural interests and considerable activity in coal mining, steel making, and allied interests.

Secretary Meyer writes: "The Cambria County Medical Society should receive the reward for having shown the greatest interest in this work. We could not have succeeded, however, except for the coöperation received from the State health authorities, the Cambria County Chapter of the American Red Cross, and the county school authorities. In 1921, members of our Society, urging the use of toxin-antitoxin, ap-

peared before school boards of health and parent-teacher associations in all boroughs and townships throughout the county. After six months of this preparatory work, permission having been received from the various school boards, the Red Cross nurses arranged for the immunization of children, securing permits from parents, etc. The State Health Department furnished the toxin-antitoxin, and the members of our County Society, without remuneration, immunized in the year 1922, 17,000 Cambria County school children, exclusive of the city of Johnstown. This work was continued free of charge until January 1, 1927. Parents are now asked to pay a moderate fee for the immunization, ranging from one to three dollars per child, depending on the number of children in the family, economic circumstances, etc. The Red Cross does the detail work, collects the fees, the State Health Department furnishes the toxin-antitoxin, but the doctor is paid $25 a day for his work. The members of our Society are called in alphabetical order, each being given an opportunity to do immunization work. I believe 25,000 Cambria County children, exclusive of the city of Johnstown, have been immunized to date. Johnstown public schools are now preparing for a similar campaign, the work to be done free of charge. I might say in conclusion that it is team-work which has made our campaign a success."

The report from the Cambria County Medical Director—a three-page letter—confirms the report from the secretary of the Society, referring to the Cambria County Medical Society as "the best society in the State."

In contrast to the pioneer work of the Cambria County Medical Society we quote from the report of the secretary of the Franklin County Medical Society, which has a membership of fifty-three physicians, practicing in an agricultural county with a population of 74,730. "Our County Medical Society was never consulted nor asked to assist in any way. The State health authorities, consistently ignoring the county medical society, assumed full control of all activities, consulting and soliciting help of welfare organizations, furnishing toxin-antitoxin free of charge, and asking individual physicans to work without remuneration. Practically every child in Franklin County has been immunized." In both counties it will be noted that while the children of neither county have suffered, proper team work is lacking in one county.

Alexander H. Stewart, serving as secretary of the Indiana Medical Society and as county medical director, records that "Members of the Indiana County Medical Society coöperated splendidly, and the Indiana County Health Association made diphtheria immunization their program for the year 1926, doing a good work. Children from some of the rural schools walked as far as four miles to a center where the injections were being given."

In Allegheny County, where to date approximately 33,000 children have been immunized outside of the towns of Pittsburgh, McKeesport, Clairton, and Dormont, twenty-eight centers were established for inoculation. In the most successful campaigns the work was centered in the office of the school principal, and the success attained was proportionate to the activity manifested by the school official. The director states that in most centers the physicians coöperated heartily, offering their services gratis.

The medical director of Blair County reports that in 1923, 3,000 immunizations were given without charge. During 1924-1925, physicians in private practice were to complete the work, but failed to do so, and there were few immunizations during these years. In 1926-27, seventy-five per cent of all school children in Blair County were immunized free of charge.

Bradford County reports success from team work by physicians, the local newspaper, the local hospital, and the Red Cross.

In Reynoldsville, Jefferson County, 974 children were given toxin-antitoxin in 1925. In 1926, these children were Schicked, and 128 who remained positive were revaccinated.

Members of the Lancaster County Medical Society volunteered as aids to medical school inspectors in giving toxin-antitoxin. One County Medical Society officer reports that in portions of the county where State health nurses were giving immunizations, 50 to 60 per cent of the children were immunized. In one borough (same county), where the work was done by local physicians at the town's expense, 95 per cent of the school children and preschool children were immunized.

It is apparent from reports that in many counties immunization was administered by State health nurses. Several counties report interest on the part of the public, but lack of funds to pay for physicians' services, this being notably true of rural counties with no large towns or villages. Reports from most counties indicate that the Schick test was not given before immunization. Where possible, the State Health Department collected thirty cents for the necessary toxin-antitoxin to complete each immunization. One county society officer, in reporting, states that as his contribution as a member of his county medical society he gave toxin-antitoxin to 130 school children in his office free of charge, but that the nurses and other workers were paid. In practically every county report the greatest credit is given to the local newspapers, public-school representatives, the State Health Department representatives, and welfare organizations such as the Red Cross, health associations, parent-teacher organizations, women's clubs, and social clubs.

To the proper officers of Philadelphia and Pittsburgh and to the medical director of the Bureau of Child Health of the State of Pennsylvania, J. Bruce McCreary, we addressed a letter asking the following questions: (1) What coöperation and assistance have you had from county medical societies and individual members in practice? (2) What assistance do you desire from them? (3) What constitutes the greatest single contribution to the success of your work in suppressing diptheria?

From H. G. Benz, M.D., superintendent of the Bureau of Child Welfare, Pittsburgh, we learned that in his city the small force of workers available has been able to visit 109 of the 212 schools in the city, Schicking 25,223 of a total of 66,549 pupils enrolled. Of those tested, 12,404 have been immunized. Fourteen hundred children of preschool age have been immunized, and all children living in institutions throughout the city have been tested and immunized. Dr. Benz says: "There are many physicians in private practice who are doing immunization work, but not nearly to the extent to which it should be done. As to what constitutes the greatest single contribution toward success in suppressing diphtheria, I find it hard to choose between two things: first, the extensive culturing of all suspected diphtheritic prospects, which included sore throat, nasal-discharge cases, and contacts with any carrier or case of clinical diphtheria; second, the immunization of children in the susceptible ages from six months to ten years. The Pittsburgh Health Department issues temporary certificates showing the number of doses of toxin-antitoxin which have been given to each indi-

vidual child, a permanent certificate being given only after a negative Schick test from one, two, or three tests. I recommend more publicity regarding immunization, such publicity to be given by every method available, not sporadically, but consistently."

From Dr. Wilmer Krusen, director of the Department of Health, Philadelphia, we learned that including public schools, parochial schools, and child-caring institutions, a total of 115,682 children were immunized prior to January 1, 1927. In addition to these, 22,702 children of preschool age were Schicked and immunized in the year 1926. Dr. Krusen states: "The Philadelphia County Medical Socitey has done excellent work. We feel that our departmental work has been successful in that the medical profession in Philadelphia has accepted and is putting into practice immunization against this disease. Forty-five per cent of the public-school children have been immunized since such work was undertaken last year. The greatest single contribution to the success of our diphtheria work may be attributed to the publication in the *Monthly Bulletin* of the Department of Public Health of short, exact, and authorative information, thus enabling the medical profession to speak intelligently to their patients about this method of prevention, and enabling the individual physician to carry out this procedure himself."

I consider the following observations by Dr. McCreary based on reports received from every county as late as May 15, 1927, well worth recording: "The proportionate number of children applying for immunization is rapidly growing, and in practically all of the twenty-three second-class school districts, the medical school inspectors and nurses are adopting the plan of the immunization of all new entrants. The greatest single contribution to the success of our work has been the full coöperation of local school authorities, together with the support we have received from the medical profession at large. I feel safe in stating now that 90 per cent of the physicians of Pennsylvania have adopted the immunization of children against diphtheria as a universal practice or urge it as they urge vaccination against smallpox. Five or six of the outstanding laboratories producing and selling toxin-antitoxin report a rapid increase in their sales to physicians in private practice and to pharmacists in Pennsylvania. I fully believe that by 1930 diphtheria will have been eliminated as an epidemic disease in our State."

From figures at hand, I believe that since the beginning of the State-wide campaign in Pennsylvania, including the cities of Pittsburgh and Philadelphia, 760,000, 65 per cent of the desired total, have been immunized against diphtheria. In 1921 there were 20,000 cases of diphtheria in Pennsylvania, with over 2,000 deaths. In 1926 there were 8,443 cases with 819 deaths, representing a saving of 1,200 young lives in the year 1926, largely due, no doubt, to the preventive benefits of toxin-antitoxin. To achieve ultimate success, all concerned in the prevention of diphtheria (parents, physicians, public-health and public-school authorities) must learn that teamwork is indispensable. Individual physicians need to remember that, along with smallpox and typhoid fever, diphtheria is about to be relegated to the class of rare diseases, and must continue to work unselfishly to that end. Laymen must develop the character required for application of the Golden Rule and a proper sense of values, as expressed in dollars, when receiving the benefits of preventive medicine.

Proud of the traditional devotion displayed by my Keystone State colleagues throughout this sickness-prevention campaign in private and in public practice, and grateful to the eighty-two who have responded to my questionnaire, I confidently submit in turn to the representatives present from New York and New Jersey the challenge implied in the question: Can you beat it?

Dr. J. B. Morrison, Newark, N. J., Secretary of the New Jersey State Medical Society: Both New York and Pennsylvania are ahead of New Jersey in this preventive scheme in the treatment of diptheria, but I think, once our campaign is established and under way, our figures in two years will be comparable at least to those given us today. We are just forming an organization, and we believe that success in New Jersey depends upon organization. The matter was brought up at a conference some time ago, and the question arose as to whether the State Medical Society should father this or whether it should be undertaken under the auspices of some other organization. The State Medical Society, through its officers, declined to be the prime mover for fear the question of the medical trusts might be brought to bear and the public might be led to believe that we were expecting financial returns, so we urged the State Board of Health to inaugurate the organization, and they asked the State Medical Society to participate. The State Board of Health, the State Officers' Association, and State Board of Education, the women's clubs, parent-teachers organizations, fraternal organizations, and the labor unions and every society in New Jersey where we can expect coöperation and action have been invited to participate in this campaign. We interviewed the Governor, and he fathers the campaign, and I have a letter from him saying that the State Department will be behind this so far as it is in its power to be. He will address the meeting and help us to whatever extent is possible. We feel that the Woman's Auxiliary will be of considerable benefit to us in this movement, because through them we expect to get a house-to-house canvass and the influence that a mother who has her child to take care of can bring upon other mothers in inducing them to have their children submitted to the treatment.

The question of state medicine came up here as it always does. The State officers told us that they had found disinclination on the part of physicians to engage in any of these campaigns because they felt that they were aiding state medicine. It seems to us who have taken an active part in this campaign that unless we can induce all the physicians in the State to give their services, free if necessary, and if not, for a very small financial consideration, they themselves are forcing state medicine. We know that during the last three years, bills have been introduced asking permission by the State Board of Health to educate health doctors with a short term of study so that they may do the clinic work which the physician should do. It shows the entrance of the wedge, that if the medical profession will not take the lead in this, if we cannot induce every member of the county societies to see the matter in its broad light, we shall fail. The members who are going into the public-health work are going into it as a life work, with the enthusiasm of missionaries. They have unlimited resources behind them and are here to stay, and unless we direct and help them the work will be taken out of our hands. In New Jersey we are getting together a great deal of information, and these papers and pamphlets will be published and presented to our committee when the progress is sufficient.

Dr. Frank C. Hammond: As stated, during the past winter the Philadelphia local board of health carried on quite a campaign for immunization of children of

school age. Not a few physicians in Philadelphia took umbrage at this, claiming that they were robbed of a certain amount of office work. Many physicians in Philadelphia felt that they should be permitted to do the immunization. The view of the local board of health is that the attending physician should do it, but in many instances the parents took the children to the attending physician and he did not know about the immunization or was too indifferent to do it. We find that quite a few of the physicians know little about toxin-antitoxin. We tried to show them the proper procedure, and after they learned the technic they took a different attitude. They said they were willing to let the board of health do it, but on the other hand, the family often would prefer to have it done by their physician. The physicians also said that they received only so much for an office visit and did not see how they could afford to do an immunization, including the use of toxin-antitoxin. We suggested to them that the parents buy the toxin-antitoxin and bring it with them for the injection.

Dr. Frank Overton: This question ties up the question of medical education in a most wonderful way. In my town the doctors in general have been rather hard-boiled and have fallen down on the whole proposition. We have a health officer there who is an old man and who thought immunization should be done. The school nurses said "We don't want the old fellow to do it." With another doctor, however, the health officer held two clinics, and without any effort at more than the ordinary publicity which is going on in the counties in the State, the children simply flocked there in droves. The doctors, seeing this, agreed to take their turns in giving the immunization, and it became a very popular thing, although there was no special campaign to start the clinics.

Dr. Leonard Redding, President of the Lackawanna County Medical Society, Scranton, Pa.: The toxin-antitoxin campaign has gone over well in Lackawanna County. We have occasion to check up the number of children who have had a health survey which has just been completed by Dr. Haven Emerson. Everybody was agreed that between 70 and 90 per cent of the school children had had the toxin-antitoxin.

Dr. James E. Sadlier: To some it may seem wrong that the medical profession should have to give away its services. The profession has always been very generous, and if a great thing can be put over and we can eliminate the deaths from diphtheria in these States, it is quite worth while for physicians to make the sacrifice. In Newburgh it has been done successfully and in a way that will be an object lesson. I feel, furthermore, that, the initial work having been done with this great mass of cases, a great deal has been done toward education of the public. I know among four or five thousand doctors, one of the busiest men I can think of today, who has utilized the lay organization of every kind in his district, and he has as near 100 per cent immunization as it is possible to get. He told me he had not received a dollar for it, that he did not want a dollar, that all he wanted was to see no more diphtheria in his district. Practicing beside him is another man who has no immunization cases. I think it is a great idea to put this over, even though the medical profession has to sacrifice financially, and I do not see how it can be done for years and years to come unless the lay organizations and the state departments help us to do it.

Dr. Joseph S. Lawrence: In New York State we are concentrating as much as we can now on the preschool child. Of course, a great many of the immunizations have been done on school children, but the dangerous age is between the years of three and five, so we are now concentrating on those children. That necessitates the coöperation of the family physician; that is, it necessitates getting to the family, and the best way is through the family physician. The large clinics are also trying to bring in the preschool child.

As to the matter of fees, in most instances in New York State the physicians who are doing the private work are charging a fee for each inoculation, but in Schenectady they agreed among themselves to charge $5 for a complete immunization of one child in a family, $7 for two children in the same family, and $9 for three children in the same family. They felt in that way they would be amply repaid, and it would encourage the work, which has proved to be the case. In the first month twenty-four physicians reported having done some immunizations. In the second month there were thirty-four reporting out of about a hundred physicians. Of course, as mentioned by Dr. Hammond, there are a number of physicians who just will not do the work; they simply turn it over to the health officer. In one county the physicians are being paid 75 cents per immunization by the county health authorities. In that case the nurses collect a dozen or so of the children at some particular spot, and the physician goes there and immunizes them and the fee practically amounts to an office call.

One point I should like to suggest for your further consideration is the relation of these two papers. In all the newspaper reports of immunization it is rarely that the family physician is mentioned; it is usually some public organization or representative. That is perfectly natural. It is the business of the public-health nurse to let it be known that she is making good to the public. Likewise the school or city physicians or health officers are using public funds, and must state what they are doing for the money, whereas the private physician does not make any accounting for the fees he collects. But from the point of view of being fair to the public and to the private physician it seems to me that the publicity given to this work should show that a proportion of the immunization is done by the regular practicing physician in his line of duty and the other portion by the public agencies. We should help those who are getting out publicity on these things to see that point of view. I do not believe they intentionally overlook the physician, but it has the same effect. The average person talking about immunization thinks of it as a public-health activity rather than a private-physician's activity.

Dr. H. W. Albertson: If State medicine comes it will be because of a great many weak-kneed members of the medical profession, not because the public wants state medicine, but because we have among us men who would just as lief practice state medicine and receive a few paltry dollars for their work, poorly done, as to practice decent medicine today, which they do not do and will not attempt. After years of work in this line of endeavor regarding periodic health examinations, I am convinced that the members of the medical profession are not by any means aroused to their own interest in this very important matter. I am sorry that it is so, but I sincerely believe that the greatest lesson we can take from this conference is to go back to our own fellow physicians and imbue them with some of the enthusiasm which comes to us from these many discussions.

THE MEDICAL SOCIETY

OF THE STATE OF PENNSYLVANIA

SCIENTIFIC PROGRAM

SEVENTY-SEVENTH ANNUAL SESSION

Pittsburgh, October 3-6, 1927

GENERAL MEETINGS

LOUNGE, FIRST FLOOR, UNIVERSITY CLUB

Tuesday, October 4th, 10 A. M.

Call to order by the President.
HARRY W. ALBERTSON, Scranton.

Invocation.
THE REV. ROBERT MACGOWAN, D.D., Pastor, Bellefield Presbyterian Church, Pittsburgh.

Address of Welcome.
THE HONORABLE CHARLES H. KLINE, Mayor, City of Pittsburgh.

Address of Welcome.
CHARLES H. HENNINGER, President, Allegheny County Medical Society.

Presentation of Program.
THOMAS G. SIMONTON, Chairman, Committee on Scientific Work.

Announcement of Scientific Exhibit.
ALBERT J. BRUECKEN, Chairman, Scientific Exhibit.

Announcement of Entertainments.
ROBERT L. ANDERSON, Chairman, Local Committee on Arrangements.

Introduction of Delegates from other Societies.

Installation of the President-Elect.

President's Address.
ARTHUR C. MORGAN, PHILADELPHIA.

Address.
JABEZ N. JACKSON, Kansas City, Mo., President of the American Medical Association (by invitation of the Board of Trustees).

The Imperative Needs of Pennsylvania in Providing for the Care of Her Mental Dependents and Moral Offenders.
CHARLES H. FRAZIER, Philadelphia.

OUTLINE. All Pennsylvania state-owned institutions for the insane, the feeble-minded, the young and the old offender, are overcrowded, understaffed, and for the most part lacking in the essentials for proper care of their unfortunate wards. Individual care that might mean recovery for many patients, therefore, cannot be given. Living conditions for doctors, nurses, and attendants are deplorable. Every two years the Legislature has appropriated money, but, in the main, only enough for running expenses and for piecemeal building here and there. There has never been a well-thought-out plan of building State institutions on a unit basis so that they could expand at need. Hence we are now confronted with a situation in which no Legislature could possibly think of appropriating enough money to meet the present requirements. A $50,000,000 bond issue that will finance a careful ten-year building program for State-owned institutions for these unfortunates has passed two sessions of the Legislature, and will be submitted for popular vote in November, 1926.

Stenographer—MISS F. E. DILLAN, Hume-Mansur Building, Indianapolis, Ind.

Wednesday, October 5th, 10 A. M.

10-10.55 A. M. Case Reports.

(Five minutes each)

1. Vesical Calculus in the Female; Report of Two Cases; Rarity of the Condition.
FRANK C. HAMMOND, Philadelphia.

2. Spontaneous Rupture of the Aorta, One and One-Half Inches above the Diaphragm (Lantern Demonstration).
CHARLES G. STRICKLAND, Erie.

3. A Second Attack of Syphilis Four Years After the First (Lantern Demonstration).
SIGMUND S. GREENBAUM, Philadelphia.

4. Echinococcus Cyst of the Liver (Lantern Demonstration).
BENDER Z. CASHMAN, Pittsburgh.

5. Chronic Enteritis in Arteriosclerotic Patients (Lantern Demonstration).
EDWARD P. GRIFFITHS, Pittsburgh.

6. Neurasthenia—A Résumé.
THOMAS M. T. MCKENNAN, *Pittsburgh.*

General Discussion (10 minutes).

Discussion of Dr. McKennan's paper to be opened by CHARLES H. HENNINGER, Pittsburgh.

11-11.55 A. M.

1. Heliotherapy in the Treatment of Tuberculosis; an Evaluation (Lantern Demonstration). (15 minutes.)
ALEXANDER ARMSTRONG, White Haven.

OUTLINE. History of sun baths. Description of rationale of procedure in artificial heliotherapy, physiology and effect on tissue of the various rays, method of application, effect on pulmonary tuberculosis, and effect on localized tuberculosis.

2. Mixed Infection in Pulmonary Tuberculosis (Lantern Demonstration). (15 minutes.)

Meyer Solis-Cohen, Philadelphia.

Outline. Mixed infection in pulmonary tuberculosis is frequently a combination of a tuberculous pulmonary infection with a non-tuberculous infection of the upper respiratory tract. Necessity of controlling the latter before the former can he checked. This may require removal of infected tonsils or opening of an infected sinus, always preceded and followed by the raising of resistance through the proper administration of a vaccine consisting chiefly of the infecting organisms as determined by pathogen-selective culture.

3. The Prophylaxis of Exophthalmic Goiter (Lantern Demonstration). (15 minutes.)

Thomas T. Sheppard, Pittsburgh.

Outline. Evidence for considering exophthalmic goiter as a poly-glandular disease and one to which there may he a constitutional pre-disposition. Review of the factors which precipitate the disease. Discussion of the ways of lessening the possibility of its onset.

Discussion of papers 1 and 3 to be opened by Charles H. Marcy and Benson A. Cohoe, Pittsburgh. (Five minutes each.)

12 Noon-12.55 P. M.

The Diagnosis and Surgical Treatment of Cervical Rib (Lantern Demonstration). (55 minutes.)

Alfred W. Adson, Rochester, Minn. (guest.)

Thursday, October 6th, 2 P. M.

2-2.55 P. M. Symposium on Application of Radium and Radon.

Factors in the Selection of Proper Cases. (15 minutes.)

William H. Cameron, New York, N. Y.

Gynecological Uses.

Floyd E. Keene, Philadelphia (Lantern Demonstration). (15 minutes.)

Dermatological Aspect (Lantern Demonstration). (15 minutes.)

William H. Guy, Pittsburgh.

General Discussion (10 minutes).

3-3.55 P. M.

The Eclamptic and Preëclamptic Woman.

Harold A. Miller, Pittsburgh, *Principal* (25 minutes.)

Diego B. Martinez, Pittsburgh, *Associate* (15 minutes.)

Outline. Presenting a critical clinical study of one hundred consecutive cases in which all treated preëclamptic patients were able to continue their pregnancy. In the preconceptional nephritic cases, the blood pressures and urinary findings remained the same, but the patients were free from other symptoms. All adequately treated cases of eclampsia have recovered.

Discussion to be opened by A. H. Bill, Professor of Obstetrics, Western Reserve University, Cleveland, Ohio (Lantern Demonstration). (15 minutes.)

4-4.55 P. M.

The Nature of Obesity (Lantern Demonstration). (55 minutes.)

L. H. Newberg, Ann Arbor, Mich. (guest).

Outline. Obesity is dealt with by writers under two headings: (1) exogenous, caused by simple overeating; and (2) endogenous, implying that fat accumulates as the result of a perversion of the metabolism. Review of the literature shows this assumption has no basis in fact. A prolonged metabolic study of a typical case is presented to demonstrate that the weight is determined by the ingo and outgo of energy, except for short periods when weight is lost either too slowly or too rapidly, due to (1) retention of water by the body, or (2) elimination of extra water from the body.

SECTION ON MEDICINE

LOUNGE, FIRST FLOOR, UNIVERSITY CLUB

Officers of Section

Chairman—W. W. G. Maclachlan, 200 S. Craig St., Pittsburgh.

Secretary—Jesse L. Lenker, 232 State St., Harrisburg.

Executive Committee—O. H. Perry Pepper, Philadelphia; Roy Ross Snowden, Pittsburgh; Charles Falkowsky, Jr., Scranton.

Stenographer—Mrs. Irene Hilton Snyder, 1641 Marshall Field Annex, 25 East Washington St., Chicago, Ill.

(Note—Essayists will please deposit original copies of their papers with the secretary of the Section when they have finished reading them. The Journal will not accept carbon copies.)

(Note—The ringing of the bell, announcing the beginning, the division, and the conclusion of each 55-minute period, is beyond the control of any officer or member of the Section. Ample warning of this fact, with frequent reference to time allotted, has been given all who appear on the program.)

In each 55-minute period in the Medical Section, essayists are allotted a total of 40 minutes, and general discussion 15 minutes.

Tuesday, October 4th, 2 P. M.

2-2.55 P. M. A Study of the Material in a Neuropsychiatric Clinic

The Functional Cases from the Standpoint of Etiology, Clinical Symptoms, and Treatment.

Theodore H. Weisenburg, Philadelphia, *Principal.*

Organic Nervous Disease; Type of Cases and their Treatment.

Clarence A. Patton, Philadelphia, *Associate.*

Organic and Functional Nervous Disease from the Viewpoint of the General Practitioner.

Henry Pleasants, Jr., West Chester, *Associate.*

Outline. The nervous clinic in the Orthopedic Hospital and Infirmary for Nervous Diseases is the oldest in the United States, having been organized by S. Weir Mitchell in 1870. A brief report, with a discussion of certain phases of organic and functional nervous diseases, is presented as it occurs in one of the three clinics.

Discussion opened by Theodore H. Diller, Pittsburgh.

3-3.55 P. M. Symposium on Pernicious Anemia

Infection in Relation to Pernicious Anemia.

Frank A. Evans, Pittsburgh, *Principal.*

Outline. Although the recent brilliant work of Minot and his collaborators suggests that pernicious anemia is a deficiency disease, the question of infection as a primary etiologic factor has not been settled. One must keep in mind the frequent reports of "monilia" in the intestines of patients with sprue, a disease resembling pernicious anemia closely, and the presence of putrefactive organisms high up in the intestines under circumstances associated with anemia. These and similar observations make it necessary to keep the mind open in regard to infection in relation to pernicious anemia.

The Present-Day Treatment of Pernicious Anemia.
WILLIAM J. FETTER, Pittsburgh, *Associate.*

OUTLINE. A series of cases which have been followed for a year and a half after the Minot and Murphy method of liver feeding will be described. Certain other phases of treatment will be considered. The experience with the above treatment has been very favorable.

Discussion opened by CARL E. ERVIN, Danville.

4-4.55 P. M.

Demonstration of Pathologic Specimens from the University of Pittsburgh, in Scientific Exhibit, first floor, Hotel Schenley.

Wednesday, October 5th, 2 P. M.

2-2.55 P. M. Symposium on Rheumatic Fever

Etiology and Specific Treatment of Rheumatic Fever.
JAMES C. SMALL, Philadelphia, *Principal*

OUTLINE. Introductory remarks. Acute arthritis as a lesion of minor importance in rheumatic fever. Rheumatic fever as an infectious disease—toxemia or bacteremia. Association of streptococci with the etiology of rheumatic fever; questions concerned with the serology of the various strains isolated; no dominant strain. The streptococcus cardioarthritidis; isolation; distribution, mode of transfer; pathogenesis; local lesions in pharynx; characteristics of streptococcus cardioarthritidis. Antibodies in patient's serum for streptococcus cardioarthritidis. Preparation of antiserum for therapeutic use. Use and action of this serum—illustrated by case reports. Results obtained with the serum—three stages of detoxifying reaction. Nature of the antibodies in the antiserum. The uses of vaccines and their place in the specific treatment. Significance of a specific treatment for rheumatic diseases and the work remaining to be done.

The Importance of Prolonged Convalescent Care in Rheumatic Heart Disease (Lantern Demonstration).
WILLIAM D. STROUD, Philadelphia, *Associate.*

OUTLINE. A résumé of the present clinical and pathologic evidences of persistent activity of the rheumatic infection in the heart for many years after all evidence of arthritis has disappeared. The present accepted treatment for patients suffering from rheumatic cardiovascular damage, and the necessity for some more effective therapeutic measures. A discussion of the results obtained over a period of five years in 250 children with cardiovascular damage at the Heart Hospital conducted by the Philadelphia Heart Association.

Electrocardiographic Studies in Rheumatic Fever (Lantern Demonstration).
THOMAS M. MCMILLAN, JR., Philadelphia, *Associate.*

OUTLINE. A brief discussion of the causes of the extraordinary electrocardiographic changes that occur in a large percentage of cases of acute rheumatic fever. This will be followed by a lantern demonstration of the transient changes in rhythm, conduction, character of waves, etc., that are met with. The percentage of cases showing these changes and the importance of these changes will be discussed.

Discussion opened by ROBERT G. TORREY, Philadelphia.

3-3.55 P. M. Symposium on Physical Therapy

Physical Therapeutics; Its Use in the General Practice of Medicine.
CLEMENT R. JONES, Pittsburgh, *Principal.*

OUTLINE. The place of physical therapy in the general practice of medicine. Its use in the hospital. To what extent should it be a part of medical-school curricula? Work of the new Council on Physical Therapy of the American Medical Association.

The Application of Physical Therapy to Acute Pulmonary Disease.
I. HOPE ALEXANDER, Pittsburgh, *Associate.*

OUTLINE. Diathermy as used in the treatment of lobar pneumonia and acute infections of the pleura is not to be considered a method of treatment, but an adjuvant.

The Application of Physical Therapy to the Treatment of Nervous and Mental Disorders.
HAROLD L. MITCHELL, Pittsburgh, *Associate.*

OUTLINE. Physical therapy has a distinct place in the treatment of nervous and mental diseases. It is only an aid, however, and by no means a specific therapeutic agent. In the neuroses it is a valuable supplement to the various types of psychotherapy; in the psychoses it is especially helpful in improving the physical condition of the patient and as a quieting or stimulating measure; in the organic nervous conditions it is an adjuvant of definite value. In every instance the selection and use of physical therapy should be made with a clear understanding on the part of the physician and the patient that only help and not a cure can be expected.

Discussion opened by HENRY C. WESTERVELT, Pittsburgh.

4-4.55 P. M.

Basic Principles in the Treatment of Ulcer.
WALTER C. ALVAREZ, Mayo Clinic, Rochester, Minn. (guest).

OUTLINE. A review of what we really know about the causes of ulcer and the agencies that prevent healing. What do we know about the modus operandi of a gastro-enterostomy, and what real reason have we for prescribing many of the things we do prescribe?

Thursday, October 6th, 9 A. M.

9-9.55 A. M. Case Reports

(Five minutes each)

1. Acute Pancreatitis Hemorrhagica (Two Cases).
ALBERT R. GARNER, Norristown.
2. A Case of Amnesia, with Recovery.
THEODORE DILLER, Pittsburgh.
3. Specific Treatment of a Case of Meningococcic Meningitis by Lumbar, Cisternal, and Ventricular Routes.
ROLAND N. KLEMMER, Lancaster.
4. Hirschsprung's Disease in an Adult.
ROBERT DENNISON, Harrisburg (nonmember).
5. Pancreatic Cyst.
HENRY KLINZING, Pittsburgh.
6. Chronic Endocarditis.
JOHN W. BOYCE, Pittsburgh.
7. Cardiospasm (Lantern Demonstration).
JOHN D. GARVIN, Pittsburgh.
8. Pulmonary Abscess.
J. SLATER CRAWFORD, Pittsburgh.

10-10.55 A. M. Symposium on Diseases of the Lung

Some Clinical Points Relating to the Diagnosis of Empyema (Lantern Demonstration).
GEORGE W. NORRIS, Philadelphia, *Principal.*
DAVID R. BOWEN, Philadelphia, *Associate.*

OUTLINE. A series of lantern slides illustrating the development and progress of empyema.

Postoperative Pulmonary Atelectasis.
WALTER ESTELL LEE and GABRIEL F. TUCKER, Philadelphia, *Associates.*

OUTLINE. Massive atelectasis a phenomenon recognized in association with varied conditions. All have two factors in common which we believe have some bearing upon the etiology of pulmonary atelectasis. Interference with the respiratory movement may be as slight as that resulting from posture, and as great as that of the voluntary or reflex inhibition from the postoperative pain of a laparotomy, or even reach the complete paralysis which occurs in diphtheria. Bronchial obstruction clinically found to be caused by foreign bodies, bronchial secretion, or peribronchial pressure as produced by tumors. Massive pulmonary atelectasis comparatively a rare condition, with an incidence of about 10 per cent. Partial pulmonary atelectasis probably a very frequent condition. The arrest in these atelectatic

areas of multiple emboli coming from the operative field is probably the lesion which so frequently occurs after operative procedures, commonly called postoperative or postanesthetic pneumonia.

Changes in the Serum Salt Concentration in the Blood During Lobar Pneumonia, and Their Relation to Therapy.

William Sunderman and J. Harold Austin, Philadelphia, *Associates.*

Outline. Lobar-pneumonia patients in Dr. George W. Norris' service at the Pennsylvania Hospital were studied particularly in regard to changes in the electrolyte concentration of the blood serum. Chemical analyses were made in each case once or twice before and after the crises. The effect of salt therapy on the electrolyte concentration of the blood.

11-11.55 A. M. Disease of the Coronary Artery

Is Angina Pectoris Synonymous with Coronary-Artery Disease?

William Egbert Robertson, Philadelphia, *Principal.*

Outline. Relation of coronary disease to angina pectoris. Disease of the coronaries has been found in all grades, from the mildest to the most destructive, both with and without attacks of pain. Brief consideration of the coronaries, anatomically, physiologically, and pathologically. Lack of uniform correlation between clinical phenomena and postmortem findings. Coronary disease compared with other factors in explaining symptoms.

The Physiologic Type of Electrocardiogram as Compared with the Pathologic (Lantern Demonstration).

Joseph B. Wolffe, Philadelphia, *Associate.*

Outline. Coronary circulation and its relation to cardiac function, the conductive system, the heart muscle, and the electrocardiogram. Consideration of the coronary anastomosis from an experimental point of view. The electrocardiogram as an aid in the diagnosis and prognosis of the coronary lesions or angina pectoris.

Studies on the Coronaries; Results of Histologic and Injection Experiments.

Jefferson H. Clark, Philadelphia, *Associate.*

Outline. Introduction—review of the literature. Purpose of experiments. Anastomosis during different decades. Method of study. Materials injected. Pressure necessary. Histology of anastomosing fields. Results of studies. Conclusions.

Discussion opened by Allen G. Beckley, Philadelphia.

12 Noon-12.55 P. M.

Prognosis of Hypertensive Cardiovascular Disease.

Louis Hamman, Baltimore, Md. (guest).

Outline. Patients with essential hypertension finally die of cardiac failure, apoplexy, or nephritis. A very small number die of cerebral accidents. The prognosis of hypertension is therefore largely based upon the efficiency of cardiac action. The paper considers the various factors concerned in influencing the cardiac capacity, and the varied evidence by which the strain put upon the heart may be estimated and its ability to cope with this strain gauged.

Scientific Exhibit

By Section on Medicine

9 A. M.-5 P. M.

Ballroom, first floor, Hotel Schenley

Demonstrators will be in attendance at specified times only.

Pathologic specimens from University of Pittsburgh.

SECTION ON SURGERY

Ballroom, basement, University Club

Officers of Section

Chairman—Evan W. Meredith, 121 University Place, Pittsburgh.

Secretary—Harvey F. Smith, 130 State St., Harrisburg.

Executive Committee—James H. Baldwin, Philadelphia; Harold L. Foss, Danville; George M. Dorrance, Philadelphia.

Stenographer—Mrs. M. C. Repp, 926 S. 60th St., Philadelphia, Pa.

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Tuesday, October 4th, 2 P. M.

2-2.55 P. M. Symposium on Orthopedic Surgery

Diagnosis and Treatment of Orthopedic Deformities in Early Childhood (Lantern Demonstration). (15 minutes.)

DeForrest P. Willard, Philadelphia, *Principal.*

Outline. Discussion in this paper will include the common congenital deformities, such as various types of club foot, congenital dislocation, wryneck, etc.

The Diagnosis and Treatment of Surgical Tuberculosis (Lantern Demonstration). (15 minutes.)

James O. Wallace, Pittsburgh, *Associate.*

Outline. Bacteriology of tubercle-bacillus, laying stress on the chronicity of tubercle-bacillus inflammation. An attempt will be made to differentiate from acute epiphysitis, syphilis, and rheumatism, laying emphasis on the rarity of this last condition. Lantern slides to show the blood supply to the bones and joints and why the tubercle bacillus attacks certain parts. X-ray slides of different conditions.

The Early Diagnosis and Early Treatment of Infantile Paralysis. (15 minutes.)

William J. Merrill, Philadelphia, *Associate.*

Outline. Laboratory aids to diagnosis discussed. Neglect of proper treatment during the first and second stages leads to deformities which are ofttimes difficult of correction and are serious handicaps to the patient, and also leads to continued weakness or paralysis of muscles which might have recovered under proper treatment. Treatment of the third stage, that is, residual paralysis, is essentially orthopedic and requires surgical intervention.

General Discussion (10 minutes).

3-3.55 P. M. Symposium on Injuries to the Knee and Ankle Joint

Injuries to the Knee Joint (Lantern Demonstration). (30 minutes.)

John J. Moorhead, New York, N. Y. (guest).

Outline. Intrinsic almost as causative as extrinsic trauma in knee disabilities. Synovitis usually best managed by immediate aspiration and mobilization. Arthrotomy by large incision often indicated. Knee-joint surgery resembles abdominal surgery closely.

Injuries to the Foot and the Ankle (Lantern Demonstration). (25 minutes.)

A. Bruce Gill, Philadelphia, *Associate.*

Outline. Mechanics of the foot—necessity for understanding. Fractures—ankle. Treatment of recent fractures. Method of

reduction, splinting, early movement, baking, and massage. Treatment of disabilities of old fractures. Os calcis—high percentage of disability, often very prolonged. Treatment of recent fractures; methods of reduction and fixation. Subastragalar arthrodesis the rational treatment of the old painful fracture. The forefoot (in front of the midtarsal joint)— essential principles of treatment. Dislocations—reduction by open operation if necessary. Amputations—fore-foot, Chopart's joint, Syme's amputation. Sprains—ankle and foot. Principles of treatment. Ankylosis—fibrous and bony. Methods of treatment.

4-4.55 P. M.

Acute Gangrenous Retrocecal Appendicitis.

JABEZ N. JACKSON, Kansas City, Missouri, President of the American Medical Association.

Wednesday, October 5th, 2 P. M.

2-2.55 P. M. Symposium on Carcinoma of the Rectum

Early Symptoms of Carcinoma of the Rectum. (10 minutes.)

CURTIS C. MECHLING, Pittsburgh, *Associate.*

OUTLINE. The early symptoms of cancer of the rectum are fairly uniform. A history of very obstinate constipation in one who had had regular bowel habits previously is described. This is followed by a dysentery, slight at first, but gradually growing worse. Three locations of the tumors are recognized—the lower rectal, the ampulla, and the pelvic-rectal flexure. Tumors in these locations present different symptoms. Loss of weight, bleeding, and pain—the textbook symptoms—are the late symptoms and of interest only to the pathologist.

Diagnosis of Carcinoma of the Rectum. (10 minutes.)

JESSE HALL ALLEN, Philadelphia, *Associate.*

OUTLINE. Progress in treatment depends chiefly upon earlier recognition. Diagnosis must be made on first symptoms. Six to eight months is average period of time before these patients reach the surgeon. Significance of increasing constipation, abdominal and rectal discomfort, mucous discharge, slight rectal bleeding. Onset of symptoms gradual in three-fourths and sudden in one-fourth of cases. Finger examination of rectum of prime importance. Sigmoidoscope in case of doubt. Wassermann in all cases. Value and method of biopsy. X-ray not of value. In order of importance, diagnostic procedures are palpation, sigmoidoscopy, biopsy, Wassermann.

The Choice of Operation for Carcinoma of the Rectum (Lantern Demonstration). (20 minutes.)

DAMON B. PFEIFFER, Philadelphia, *Principal.*

OUTLINE. The principle of operation for cancer of the rectum is the same as that for cancer elsewhere; namely, the removal not only of the growth but also the associated lymphatic drainage areas. The limits of excision are to be determined by the anatomic possibilities, the skill and experience of the surgeon, the condition of the patient, and the mortality of available procedures. The combined abdominoperineal excision is the ideal operation. In well-selected cases the mortality is low. Modification may be necessary in the direction of a less formidable procedure. The two-stage perineal excision is safest in average hands, and gives a reasonable expectation of cure in the lesser degrees of malignancy. The profession should learn that cancer of the rectum is the easiest of all gastro-intestinal cancers to diagnose and the most promising of cure.

Discussion by HAROLD L. FOSS, Danville, and COLLIER F. MARTIN, Philadelphia.

3-3.55 P. M. Symposium on Surgery of the Spleen

The Function of the Spleen. (15 minutes.)

THOMAS FITZ-HUGH, JR., Philadelphia, *Associate.*

OUTLINE. Diseases of the blood causally related to disease of the liver and spleen. The morbid physiology of the spleen is exhibited chiefly as hyperfunction of the erythrocytolytic and thrombocytolytic activities. The complex rôle of the liver in pathogenesis and treatment of certain blood dyscrasias involves consideration of hemoglobin and bilirubin metabolism, of calcium fibrinogen and antithrombin regulation, and of the newly discovered hematopoietic-stimulating substance of Minot.

Splenectomy in the Anemias of Childhood. (15 minutes.)

J. CLAXTON GITTINGS, Philadelphia, *Associate.*
JOSEPH STOKES, JR., Philadelphia, *Associate* (nonmember).

OUTLINE. The indications for splenectomy are discussed in detail, and the results so far recorded are presented. Apparently the careful selection of cases is the most important factor in the results—apart from the technic of operation. A preliminary blood transfusion also may be indicated.

Indications for and Technical Features of the Operation of Splenectomy (Lantern Demonstration). (20 minutes.)

GEORGE P. MULLER, Philadelphia, *Principal.*

OUTLINE. Splenectomy now a standard operation with low mortality considering serious condition of patients. Has its best indication in conditions with hemolysis and splenomegaly. Other indications. Technical considerations. Results after splenectomy.

4-4.55 P. M.

Gastric Ulcer (Lantern Demonstration).

DONALD C. BALFOUR, Rochester, Minn. (guest).

OUTLINE. The incidence and location of gastric ulcer. Discussion of the factors which are involved in the cause and the spontaneous healing of ulcer. Differential diagnosis of chronic gastric ulcer. Indications for treatment of gastric ulcer and its complications. Relative merits and indications for various surgical procedures.

Discussion by LAWRENCE LITCHFIELD, and HOLLAND H. DONALDSON, Pittsburgh, and W. WAYNE BABCOCK, Philadelphia (Lantern Demonstration).

Thursday, October 6th, 9 A. M.

9-9.55 A. M. Case Reports

(Five minutes each)

1. An Unusual Type of Congenital Malformation of the Female Genital Tract.
   HALTON C. CASSIDY, Lewistown.
2. Right Nephrolithiasis with Kidney Destruction as an End Result of Pyelitis of Childhood (Lantern Demonstration).
   JOHN P. HARLEY, Williamsport.
3. Intussusception of Sigmoid in Adult.
   W. MINSTER KUNKEL, Harrisburg.
4. Properitoneal Unilocular Hernia of the Sigmoid in an Unusual Location.
   HERBERT B. GIBBY, Wilkes-Barre.
5. Rhabdomyosarcoma of the Buttocks.
   JOHN H. WAGNER, Pittsburgh.
6. Perforating Ulcer of Invaginated End of Proximal Loop of Intestine Four Years after a Lateral Anastomosis.
   J. MCCRAE DICKSON, Gettysburg.
7. Extensive Gangrene of the Stomach.
   HARRY M. ARMITAGE, Chester.
8. Invaginated Meckel's Diverticulum Producing Intestinal Obstruction.
   HARRY R. DECKER, Pittsburgh.
9. Postoperative Massive Collapse of Lung.
   ROBERT M. ENTWISLE, Pittsburgh.

10-10.55 A. M. Symposium on "The Poor Surgical Risk"

Contributions of the Laboratory in the Diagnosis and Treatment of the Poor Surgical Risk. (15 minutes.)

JOHN EIMAN, Philadelphia, *Associate.*

OUTLINE. The laboratory can be of great aid to the surgeon in determining the operative risk or pointing out the time when the risk is reduced to a possible minimum. The laboratory aids the surgeon also in postoperative conditions with tests that will throw light on the patient's general condition and specific problems as they may arise. In general, the pathologist should work with the surgeon for the benefit of the patient.

Complicating Pathologic Factors in Abdominal Cases. (10 minutes.)

John H. Jopson, Philadelphia, Principal.

Outline. The complicating pathologic factors of special interest in abdominal cases include myocarditis, impaired renal function, jaundice, lengthened coagulation time, impaired hepatic function, acidosis, anemia, dehydration, and gastric dilatation. Myocarditis as a mortality factor in gall-bladder disease deserves great consideration. Special measures to guard against postoperative hemorrhage are of importance. The use of the Jutte tube for pre- and postoperative gastric dilatation is of undoubted value. The recognition of alkalosis, its confusion with acidosis in the past, and its appropriate treatment in a considerable number of cases is to be emphasized.

The Poor-Risk Goiter Case. (15 minutes.)

Donald Guthrie, Sayre, *Associate.*

Outline. Former methods of preparation of the poor-risk goiter patient. Multiple-stage operations with reduction of mortality but increase of morbidity of the disease. Preparation of the exophthalmic-goiter patient by Lugol's solution. Preparation of the patient with adenoma with hyperthyroidism, or toxic adenoma. Anesthesia. General vs. local anesthesia. Anoci association. Value of meticulous postoperative care.

General Discussion.

11-11.55 A. M. Symposium on Cancer of the Breast

Lantern Demonstration Illustrating Certain Principles in Cancer of the Breast. (20 minutes.)

Jonathan M. Wainwright, Scranton, *Principal.*

Outline. Demonstration of slides showing importance of removal of muscles in breast-cancer operations; frequency of multiple nodules in the breast; architectural types of breast cancer, and their significance; advantages of large sections in detecting cancer that could not be diagnosed clinically, by gross appearance, or small sections; Paget's disease of the nipple with multiple deep breast tumors of various kinds.

Development of the Modern Operation for Cancer of the Breast (Lantern Demonstration). (12 minutes.)

J. Stewart Rodman, Philadelphia, *Associate.*

Outline. The object of this paper will be to show how each important principle added to the technic of amputation of the breast for malignant disease has improved the statistical results.

Malignant Tumors of the Breast; Amputation without Removal of the Muscles (Lantern Demonstration.) (12 minutes.)

Moses Behrend, Philadelphia, *Associate.*

Outline. Comparatively few cures result from the removal of the breast for carcinoma. Potential cancers do not require the radical operation. The age of the patient is a great factor in the selection of this type of operation. Review of the literature. Results.

End Results of Amputation of the Breast for Carcinoma. (12 minutes.)

John J. Buchanan, Pittsburgh, *Associate.*

Outline. End results of the writer's operative cases of breast cancer, with summary of what may be expected from operation, considering the differences in virulence of the disease and variations in resistance of the patients.

12 Noon-12.55 P. M.

Gastrojejunal Ulcer; its Diagnosis and Management (Lantern Demonstration).

Frank Lahey, Boston, Mass. (guest).

Outline. General review of the subject: age, sex, pathology, percentage of perforations, tendency to recurrence, etiology, symptomatology, x-ray findings, diagnosis, management. Treatment: preventive measures, medical management, surgical procedures. Gastrojejunal colic fistulæ—their pathology, symptomatology, diagnosis, and treatment.

Surgical Treatment of Gastrojejunal Ulcer (Lantern Demonstration).

John B. Deaver, Philadelphia.

Outline. Disconnection of the anastomosis and excision of ulcer. Disconnection, excision, and partial gastrectomy. Disconnection, excision, and operation at pylorus to provide adequate drainage (Billroth I). Disconnection, excision, and new gastro-enterostomy. Jejunostomy. Excision of ulcer and plastic operation at gastro-enterostomy opening. A second gastro-enterostomy. For gastrojejuno-colic fistula, additional surgery according to the extent of involvement of colon.

Scientific Exhibit

By Section on Surgery

BALLROOM, FIRST FLOOR, HOTEL SCHENLEY

Demonstrators will be in attendance at specified times.

Demonstration of application of apparatus in treatment of fracture of the femur.

Demonstration of technic of proctoclysis, blood transfusion, and intravenous injections.

Demonstration of the application of wet dressings in the treatment of infections of the extremities and in the treatment of felons.

Methods of applying molded plaster splints as originally devised by Dr. J. J. Buchanan.

SECTION ON EYE, EAR, NOSE, AND THROAT DISEASES

FRENCH ROOM, SECOND FLOOR, HOTEL SCHENLEY

Officers of Section

Chairman—Stanley S. Smith, 121 University Place, Pittsburgh.

Secretary—Curtis C. Eves, 247 S. Seventeenth St., Philadelphia.

Executive Committee—Nelson S. Weinberger, Sayre; S. MacCuen Smith, Philadelphia; Glendon E. Curry, Pittsburgh.

Stenographer—Miss F. E. Dillan, Hume-Mansur Building, Indianapolis, Ind.

(Note—Essayists will please deposit original copies of their papers with the secretary of the Section when they have finished reading them. The Journal will not accept carbon copies.)

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Tuesday, October 4th, 2 P. M.

2-2.55 P. M.

Slit-Lamp Microscopy—A Clinical Aid to Diagnosis in Ocular Injuries (Lantern Demonstration). (25 minutes.)

Harvey E. Thorpe, Pittsburgh.

Outline. Slit-lamp microscopy a valuable aid in the examination of injured eyes. Medicolegal value. Value in clearing up doubtful conclusions. Increase in diagnostic ability by its use.

Discussion opened by Adolph Krebs, Pittsburgh. (10 minutes.)

3-3.55 P. M.

Plastic Surgery of Face and Mouth (Lantern Demonstration).

George B. Jobson, Jr., Franklin.

Outline. Sacred writings of India and Egypt record plastic surgery performed centuries ago. Indian method earliest. Reverdin, Ollier, Thiersch, and Wolfe grafts discussed. Skin grafting and plastic surgery closely linked. Procedures for remedying defects of nose, ears, eyelids and face. Surgery of cleft lip and cleft palate.

4-4.55 P. M.

Macular Changes in the Senile (Lantern Demonstration).

GEORGE E. DESCHWEINITZ, Philadelphia.

Wednesday, October 5th, 2 P. M.

2-2.55 P. M.

A Survey of the Semiblind School Children in the City of Philadelphia.

S. WEIR NEWMAYER, Philadelphia.

OUTLINE. Vision of practically the entire school population of 250,000 was recorded and studied. All with visual acuity of 15/70 or less vision (with or without correcting lenses) were carefully examined. Objects of survey: to know definitely the number of children requiring special education in sight-saving classes; to correct pathologic eye conditions that interfered with education. Results: number whose sight could not be improved and whose condition made it unsafe for the child to remain in regular class, about one to every 1,200 school population. About 700 studied to determine refraction and treatment. Analysis of 171 enrolled in sight-saving classes previous to survey. Study of pathologic conditions, visual acuity, refraction, sex, color, and age periods. Analysis of cases found in survey. Factors of interest to ophthalmologists and also to educators. More careful supervision needed by specialists.

3-3.55 P. M.

Pulsating Exophthalmos.

JOHN M. WHEELER, New York, N. Y. (guest).

OUTLINE. Etiology, important manifestations, prognosis, and treatment. Instructive features of cases seen by the author will be considered.

4-4.55 P. M.

Case Report.

EDWARD B. HECKEL, Pittsburgh. (15 minutes.)

Demonstration of Scientific Instruments.

Demonstration of Tangent-Screen Scotometer with Illumination Device.

WILLIAM W. BLAIR, Pittsburgh.

Thursday, October 6th, 9 A. M.

9-9.55 A. M.

Mastoiditis in Infants.

J. HOMER MCCREADY, Pittsburgh.

OUTLINE. Prevalence. Type of infants in which mastoiditis is found. Vague symptoms. Teamwork between otologist, pediatrician, and nursing force. Anesthesia. Type of operation. Results.

Discussion opened by J. K. EVERHART and THOMAS B. MCCULLOUGH, Pittsburgh.

10-10.55 A. M. Lung Abscess Following Tonsillectomy

From the Standpoint of the Roentgenologist.

WILLIS F. MANGES, Philadelphia.

OUTLINE. Early roentgen-ray diagnosis of lung abscess can be made in the majority of cases, and such examination should be advised in every case where there are any signs referable to the chest following tonsillectomy. In the majority of cases, the process has advanced to a destructive stage before the roentgenologist is called upon for assistance. From data obtained by x-ray study, an opinion can be given regarding the best form of treatment. Repeated ray studies are valuable to show progress, and lead to a closer coöperation between the roentgenologist, the surgeon, and the bronchoscopist.

From the Standpoint of the Bronchoscopist.

LOUIS H. CLERF, Philadelphia (Lantern Demonstration).

OUTLINE. If inspiration of infected material is an etiologic consideration, its early removal by bronchoscopy should prove beneficial, just as it does in foreign-body obstruction. Spontaneous cure is very largely a matter of adequate drainage through the natural passages. Bronchoscopy can aid drainage by removal of obstructing inflammatory masses, plugs of secretion or other material, and by aspiration of pus itself, thereby aiding overworked cilia. The remarkable results obtained by bronchoscopy in treatment justify its consideration as a valuable aid in treatment.

11-11.55 A. M.

A Study of Congenital and Early Developmental Variations of the Eye and Orbit.

NELSON S. WEINBERGER, Sayre, *Principal.*
WARREN S. REESE, Philadelphia, *Associate.*

OUTLINE. The various theories as to the production of congenital and early developmental defects of the eye and orbit are discussed. These defects are enumerated and elaborated upon in so far as they are of interest and importance to the practicing physician.

12 Noon-12.55 P. M.

Chronic Suppurative Otitis Media.

H. I. LILLIE, Rochester, Minn. (guest).

Scientific Exhibit

By Section on Eye, Ear, Nose and Throat Diseases

BALLROOM, FIRST FLOOR, HOTEL SCHENLEY

Demonstrators will be in attendance at specified times.

A demonstration of the technic of transillumination.

SECTION ON PEDIATRICS

CHILDREN'S HOSPITAL, *Tuesday;* LIBRARY, FIRST FLOOR, HOTEL SCHENLEY, *Wednesday and Thursday.*

(Children's Hospital is three blocks west of Hotel Schenley.)

OFFICERS OF SECTION

Chairman—FRED E. ROSS, 134½ W. Ninth St., Erie.

Secretary—Zaccheus R. Scott, Westinghouse Bldg., Pittsburgh.

Executive Committee—HORACE H. JENKS, Philadelphia; THEODORE J. ELTERICH, Pittsburgh; ROBERT K. REWALT, Williamsport.

Stenographer—MR. T. F. ARNOLD, 721-27 Real Estate Trust Building, Philadelphia, Pa.

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Tuesday, October 4th, 2 P. M.

Clinic at the Children's Hospital

(Three blocks west of Hotel Schenley.)

2-2.55 P. M.

Postural Defects of Children and their Effects on the General Health (Lantern Demonstration).

Presentation of Cases.

DAVID SILVER, Pittsburgh.

3-3.55 P. M.

Early Nervous Manifestations of Several Common Pediatric Conditions. (25 minutes.)

HENRY T. PRICE, Pittsburgh, *Principal.*

Discussion of Results in Specific Vaginitis with Demonstration of Method of Treatment. (25 minutes.)

Richard H. Middleton, Pittsburgh, *Associate.*

4-4.55 P. M.

Demonstration of Several Unusual Types of Tuberculosis in Children. (25 minutes.)

D. Hartin Boyd, Pittsburgh, *Principal.*

Demonstration and Discussion of Interesting Pericardial Conditions. (25 minutes.)

Henry C. Flood, Pittsburgh, *Associate.*

Wednesday, October 5th, 2 P. M.

LIBRARY, FIRST FLOOR, HOTEL SCHENLEY

2-2.55 P. M. Symposium on the Newborn (Lantern Demonstration).

Hemorrhagic Disease of the Newborn. (15 minutes.)

John F. Coppolino, Philadelphia, *Associate.*

Outline. Frequency, diagnosis, and management of hemorrhagic disease of the newborn.

Syphilis of the Newborn; Value of Early Treatment. (15 minutes.)

Edward D. Atlee, Philadelphia, *Associate.*

Outline. Early treatment of congenital lues is of distinct value to the child's nutrition. Weight charts of treated and untreated cases. Comparison of weight loss and weight gain. Method of treatment, dosage, etc.

Three-Hour and Four-Hour Feeding Schedules for the Newborn. (15 minutes.)

Ralph M. Tyson, Philadelphia, *Principal.*

Outline. A comparison of weight loss, day of low weight, gain, recovery of birtb weight, and amount of food secured on three- and four-hour schedules.

Open Discussion. (10 minutes.)

3-5.30 P. M. Joint Meeting of the Sections on Pediatrics and Urology—Symposium on Urology in Childhood

Enuresis—Etiology and Treatment. (10 minutes.)

John McK. Mitchell, Bryn Mawr.

Outline. Incidence, Physiologic explanation, and classification. Treatment of that group of cases the cause of which can bc determined. Treatment of tbe idiopathic group: (a) general, (b) psychotherapy, (c) endocrine-gland therapy.

Etiology, Diagnosis, and Medical Treatment of Acute Pyelitis in Children. (15 minutes.)

Norbert D. Gannon, Erie.

Outline. Avenues of infection. Predominance in females. Importance of routine urine examination. Obscure symptomatology. Differential diagnosis. Treatment.

Practicability of the Modern Cystoscope in Urology of Infancy and Childhood (Lantern Demonstration). (10 minutes.)

Leon Herman, Philadelphia.

Outline. Comparative difficulties of cystoscopy in adults and children, due to anatomic, technical, and physical differences. Modern cystoscopes for use in children—their development, types, and practicability as concerns age and sex.

Diagnosis and Surgical Treatment of Urologic Conditions in Children (Lantern Demonstration). (15 minutes.)

Benjamin A. Thomas and Joseph C. Birdsall, Philadelphia.

Outline. Children are subject to the same surgical affections as adults, and investigation is possible by the same methods. Cystoscopy, cystography, ureteral catheterization, and pyelography can be performed as effectually as in adults. No child is too young to be cystoscoped, to have its ureters catheterized, or to undergo ureteropyelography. Modern urologic investigation will often reveal pathology which could be corrected with advantage in youtb.

Chronic Pyelitis in Infancy and Childhood. (30 minutes.)

Henry F. Helmholz, Rochester, Minn. (guest).

Outline. A study of 85 cases of chronic pyelitis. Classification: (a) uncomplicated, (b) associated with abnormalities of the urinary tract. Examples of various complicating abnormalities. Diagnosis. Prognosis. Treatment.

Borderline Problems Occurring in Urology (Lantern Demonstration). (30 minutes.)

Herman L. Kretschmer, Chicago, Ill. (guest).

Outline. Frequency of borderline problems occurring in urology. The amazing development of urologic diagnosis and urologic surgery in infancy and childhood. Failure to appreciate these problems is responsible for our failure to recognize many destructive lesions until it is too late. Analysis of cases seen.

Discussion opened by Alfred Hand, Philadelphia, and Arthur I. Murphy, Pittsburgh.

Thursday, October 6th, 9 A. M.

9-9.55 A. M. Symposium on Preventive Pediatrics.

Preventive Pediatrics from an Infant-Feeding Standpoint. (15 minutes.)

Harvey O. Rohrbach, Bethlehem.

Outline. Importance of the prenatal and postpartum periods. Hygiene for infant and nurse. Breast feeding and artificial feeding in relation to gastro-intestinal and nutritional disturbances. Proprietary foods and disastrous effects. The right food and definite instructions for the nurse. Feeding in infections.

The Rôle of the Pediatric Clinic in Preventive Medicine. (15 minutes.)

Leonard F. Bender, Philadelphia.

Outline. Importance and value of preventive medicine in pediatrics. Correlation of the various clinics so that the child will get systematic care. Purpose of mothers' meetings. Importance of social-service coöperation in a pediatric clinic.

The Influence of Mental Guidance and Habit Formation on the Future Welfare of the Child. (15 minutes.)

George J. Wright, Pittsburgh.

Outline. In recent years, intensive study has been made of mental and nervous states, and with increased knowledge the problem of prevention bas been coming more and more into the foreground. Neuropsychiatrists are now convinced that the mental-hygiene movement concerns itself chiefly with the child. With the dissemination of knowledge to parents and educators for the mental guidance and habit formation in the child, it is hoped the stresses and strains of adolescence and adult life may be more safely met.

Open Discussion, 10 minutes.

10-10.55 A. M. Symposium on the Use of Light Therapy in Children (Lantern Demonstration).

Quartz Light in Skin Diseases of Children. (15 minutes.)

Leonard G. Beinhauer, Pittsburgh.

Outline. Enthusiasm for the use of ultraviolet therapy has probably overrated its real value. Its specific value for any given dermatologic affection has not been established, and must be used in conjunction with recognized forms of dermatologic treatment. Determination of dosage. A consideration of the effect of ultraviolet light on the common skin affections of children.

Light Therapy in Deficiency Diseases of Children. (15 minutes.)

Percival Nicholson, Ardmore.

Outline. General properties and methods of producing artificial ultraviolet light. Technic of administering ultraviolet light from an air-cooled mercury quartz lamp. Its effect on growth and nutrition. Its use in deficiency conditions of infancy and childhood. Review of type of cases to be treated. Results.

Light Therapy in Nonpulmonary Tuberculosis in Children. (15 minutes.)

RICHARD T. ELLISON, Philadelphia.

OUTLINE. What can be expected from light therapy in the treatment of extrapulmonary tuberculosis. Influence of altitude, environment, and regimen on results obtained. The influence of light therapy on the organism. Depth of penetration of the ultraviolet rays. Method of application, and the extent of radiation. Better restoration of function in joint tuberculosis as a result of heliotherapy.

Open Discussion, 10 minutes.

11-11.55 A. M. Case Reports

(Five minutes each)

1. Osteogenesis Imperfecta.
   FRANK P. MCCARTHY, Erie.
2. Herpes Zoster Ophthalmicus in a Fifteen-Month's-Old Child.
   ROBERT KNOX, Washington.
3. Lymphoblastic Leukemia Occurring in Twins.
   ALVIN E. SIEGEL, Philadelphia.
4. Erythema Infectiosum.
   JOSEPH B. FEELEY, McKeesport.
5. Intestinal Obstruction Due to a Duodenal Band.
   GEORGE J. FELDSTEIN, Pittsburgh.
6. Purpura Hemorrhagica in a Three-Month's-Old Infant.
   JOHN F. SINCLAIR, Philadelphia.
7. Rural Health Work with a Traveling Unit.
   MARY RIGGS NOBLE, Harrisburg.
8. Diphtheria Control.
   J. BRUCE MCCREARY, Harrisburg.

12 Noon-12.55 P. M.

Diagnosis and Treatment of Meningitis in Children.

L. E. LAFETRA, New York, N. Y. (guest).

Scientific Exhibit

By Section on Pediatrics

BALLROOM, FIRST FLOOR, HOTEL SCHENLEY

Demonstrators will be in attendance at specified times.

Demonstration of practical preventive measures handled by representatives of the Department of Health of Pittsburgh.

SECTION ON DERMATOLOGY

LIBRARY, FIRST FLOOR, HOTEL SCHENLEY

OFFICERS OF SECTION

Chairman—JOSEPH V. KLAUDER, 1934 Spruce St., Philadelphia.

Secretary—LESTER HOLLANDER, Jenkins Bldg., Pittsburgh.

Executive Committee—FRED D. WEIDMAN, Llanerch; WILLIAM H. GUY, Pittsburgh.

Reporter—THE MASTER REPORTING COMPANY, INC., 37 West 39th St., New York, N. Y.

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Tuesday, October 4th, 2 P. M.

2-2.55 P. M.

The Practitioner and the Treatment of Neurosyphilis.

JOHN H. STOKES, Philadelphia, *Principal.*

OUTLINE. The modern conception of the treatment of neurosyphilis requires a shift in emphasis so far as the practitioner is concerned. It is an obligation of preventive medicine for the practitioner to treat early syphilis more effectively and to devote his energy to controlling a symptomatic neurosyphilis rather than tabes and paresis. Methods of treating early syphilis with a view to preventing neurosyphilitic involvement. The treatment of neurosyphilis proper. The problem of the practitioner as distinguished from that of the consultant, with a brief description of essential points, including treatment with tryparsamid, which may be largely allocated to the practitioner. The relative importance of fever therapy.

Eruption Incident to Antisyphilitic Therapy (Lantern Demonstration).

WILLIAM D. WHITEHEAD, Scranton, *Associate.*

OUTLINE. Theories regarding etiology of drug eruptions. Consideration of idiosyncrasy. Previously existing dermatoses as predisposing factors to arsphenamin and neoarsphenamin eruptions. Differentiation from other drug eruptions. Mercury, bismuth, and iodid eruptions. Premonitory symptoms of impending accident. Virtues and limitations of sodium thiosulphate.

Discussion opened by FRED D. WEIDMAN, Philadelphia.

3-3.55 P. M.

Dangerous Skin Lesions (Lantern Demonstration).

GEORGE MILLER MACKEE, New York, N. Y. (guest).

OUTLINE. Diagnosis and treatment of precancerous and early cancerous lesions. Institution of immediate and adequate treatment, which constitutes the best method of reducing the incidence and mortality of cancer.

4-4.55 P. M. Symposium on Tuberculosis of the Skin

Classification of Tuberculosis of the Skin.

FRANKLIN B. MILLER, Pittsburgh, *Principal.*

OUTLINE. Differentiation of tuberculosis of skin from tuberculids, including the three main theories advanced with regard to tuberculids. Lupus vulgaris; scrofuloderma; tuberculosis verucosa cutis; tuberculosis cutis orificialis; tuberculous ulcers; Bazin's disease described. The various tuberculids discussed.

Diagnosis of Tuberculosis of the Skin (Lantern Demonstration).

PATRICIA HART-DRANT, Philadelphia, *Associate.*

OUTLINE. Lantern demonstration illustrating the various tuberculous manifestations, including the newer theories considered in the diagnosis of tuberculosis of the skin.

Treatment of Tuberculosis of the Skin.

FREDERICK M. JACOB, Pittsburgh, *Associate.*

OUTLINE. General consideration as to localized lesions and those which have an underlying tuberculosis of other organs, and the necessity of constitutional measures in certain cases, both with and without local therapy. Uses of constitutional remedies in certain types of cases which have only local lesions, and types of reactions, both focal and general, resulting. Tuberculin as a therapeutic agent. Destructive measures of various types for use on local lesions, such as cautery, electricity, surgery, radiant energy, and various kinds of chemical reagents; advantages and disadvantages of these measures. Reactions, sequelæ.

Discussion opened by JOHN B. LUDY, Philadelphia.

Scientific Exhibit

By Section on Dermatology

BALLROOM, FIRST FLOOR, HOTEL SCHENLEY

Demonstrators will be in attendance at specified times.

A clinical demonstration of the differential diagnosis in some of the most common skin diseases.

SECTION ON UROLOGY

SUN PARLOR, FIRST FLOOR, HOTEL SCHENLEY

Officers of Section

Chairman—James C. Burt, Westinghouse Bldg., Pittsburgh.

Secretary—Benjamin A. Thomas, 1900 Spruce St., Philadelphia.

Reporter—The Master Reporting Company, Inc., 37 West 39th St., New York, N. Y.

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Wednesday, October 5th, 2 P. M.

2-2.55 P. M.

Executive Session.

Exhibit of New and Useful Urologic Instruments.

3-5.30 P. M. Joint Meeting of the Sections on Urology and Pediatrics—Symposium on Urology in Childhood

Program detailed above, under Section on Pediatrics. See page 737.

Joint meeting to he held in Library, first floor, Hotel Schenley, adjoining Sun Parlor, where executive session is held.

Thursday, October 6th, 9 A. M.

9-9.55 A. M.

The Status of the Treatment of Gonorrhea. (10 minutes.)

George A. Holliday, Pittsburgh.

Outline. Pathology of the gonococcus. Organs and tissues involved. Oral medication. Local treatment; drugs to be used; prophylaxis. Abortive treatment; irrigations and instillations; vaccines; sodium iodid; protein injections, diathermy. Abuse of prostatic massage and instrumentation. Attitude of the public and the profession.

Gonorrheal Arthritis in the Adult Male; Correlation of Clinical and Urologic Findings; Treatment by Direct Injection of the Seminal Vesicles (Lantern Demonstration). (10 minutes.)

Thomas C. Stellwagen, Jr., and James F. McCahey, Philadelphia.

Outline. The authors in a previous paper pointed out the need of clinical study to correlate the urologic and joint lesions in gonorrheal arthritis. Importance of recording urologic lesions and differentiating arthritis dependent upon gonorrheal and nongonorrheal foci in the lower genito-urinary tract. Presentation of cases representative of various stages of the disease. Influence of urologic lesions on the resulting arthritis and the results of direct medication of the seminal vesicles.

The Treatment of Urethral Stricture, Prostatitis, and Seminal Vesiculitis. (10 minutes.)

Peter P. Mayock, Wilkes-Barre.

Outline. Indications for dilatation and surgery in the treatment of stricture. Evaluation of and indications for the various well-known procedures; viz., irrigations, instillations, massage, dilatation, endoscopy, vasotomy, vesiculotomy, vesiculectomy, vaccines and foreign proteins in the treatment of prostatitis and seminal vesiculitis.

Male Sterility. (10 minutes.)

William H. Mackinney, Philadelphia.

Outline. The paper is based upon the study of 162 male partners in sterile marriages. Practically all cases were investigated because the wife initiated examination. Conclusions based upon one or several examinations of semen. Causes lie in defective spermatogenesis or defective conduction. Influence of pus upon the motility of spermatozoa. Prognosis and treatment.

Discussion opened by Carl C. Yount, Pittsburgh.

10-10.55 A. M. Symposium on Prostatic Obstruction

Factors Determining the Palliative Versus the Operative Treatment of the Prostate. (10 minutes.)

Clifford M. Lane, Pittsburgh.

Outline. Palliative treatment may be divided into three groups: (1) early cases with small amount of residual urine; (2) later cases, in which immediate operation would be dangerous until kidney function, etc., returned to optimum; (3) cases in which operation would never be safe or would not increase life expectancy.

Considerations Governing the Adoption of the Proper Operative Route. (10 minutes.)

Edward J. McCague, Pittsburgh.

Outline. Examination of patient. Surgical procedure for relief of obstruction at the bladder neck. The Young perineal prostatectomy. The "punch" operation with its various modifications. The suprapubic operation. Experience with 125 prostatectomies under local anesthesia.

Pre- and Postoperative Care in Prostatectomy. (10 minutes.)

Williard H. Kinney, Philadelphia.

Outline. Essential factors in the preoperative studies; namely, cardiovascular investigation, various tests of the renal function, chemistry of the blood, comparative fluid intake and output. One- versus two-stage operation. Choice of anesthesia. Postoperative attention to drainage. Aseptic care of the operative site. Prevention of complications, etc.

Operative Technic in Prostatic Surgery (Lantern Demonstration.) (10 minutes.)

Elmer Hess, Erie.

Outline. Three surgical routes: (a) suprapubic (one- or two-stage operation), (b) perineal approach, and (c) intraurethral procedures. Discussion of the standard operative technic of suprapubic prostatectomy. The author's technic, with discussion of anesthesia. Technic of the perineal route and its modifications and indications. Technic of the intraurethral relief of prostatic obstruction, and its indications. Summary and conclusion.

Discussion opened by Stacy M. Hankey, Pittsburgh.

11-11.55 A. M.

Etiology of Urinary Calculi (Lantern Demonstration). (10 minutes.)

Daniel P. Ray, Johnstown.

Outline. Character of urinary calculi. The colloid theory of formation; colloids in the formation of crystals. Effect of feeding oxamid to animals. Calculus formation due (1) to excretion of an excessive quantity of crystalline material, (2) an insufficient amount of protective colloid, (3) the precipitation of normal colloids or the lowering of their protective activity by bacterial exudates or by foreign colloid matter formed as a result of abnormal metabolism. Infection as a factor.

The Diagnosis of Urinary Calculi (Lantern Demonstration). (10 minutes.)

Herman A. Gailey, York.

Outline. Diagnosis determined by clinical symptoms plus modern urologic measures, as cystoscopy, x-ray, ureteropyelography, stereoscopy, ureteral catheterization with or without wax tips. Superiority of the cystoscope to the sound and x-ray in vesical calculi. These agents suffice to diagnose urethral and prostatic calculi.

Rapidity of Growth of Urinary Calculi (Lantern Demonstration). (10 minutes.)

Alexander Randall, Philadelphia.

Outline. The rôle played by recurrent calculus formation. Cases illustrative of the re-formation of calculi. Deductions in regard to the proper treatment at a primary operation. Complications arising therefrom in cases of solitary kidney.

Treatment of Urinary Lithiasis (Lantern Demonstration). (10 minutes.)

WILLIAM L. ESTES, JR., Bethlehem.

OUTLINE. Consideration of renal, ureteral, and vesical calculi. Methods of extraction, and indications for nephrectomy. Indications for cystoscopic versus operative removal of ureteral calculi. Necessity of search for cause and its removal in vesical calculi; viz., prostatic hypertrophy, infection, etc. Litholapaxy versus cystolithotomy. Considerations of vesical calculi following prostatectomy. Prophylactic treatment.

Discussion opened by WILBUR H. HAINES, Philadelphia.

12 Noon-12.55 P. M. Case Reports

(Five minutes each)

1. Prolapse of the Urethra in Childhood.
   HIRAM R. LOUX, Philadelphia.
2. Extensive Tumor of Corpus Cavernosum.
   DAVID P. MCCUNE, McKeesport.
3. Stricture of the Ureter Associated with Lues.
   SYLVIA J. ROBERTS, Harrisburg.
4. Two Large Diverticula of the Bladder, with Symptoms.
   CARLYLE N. HAINES, Sayre.
5. Incontinence From Retention of Urine Due to Fecal Impaction Incident to Congenital Rectal Obstruction.
   ENOCH H. ADAMS, Danville.
6. Complete Retention Due to Prostatic Hypertrophy, Complicated by Stricture.
   JOSEPH APPLEYARD, Lancaster.
7. End Result of Operation for Hydrocele.
   PAUL F. KERSTETTER, Scranton.
8. Two Cases of Ruptured Kidney.
   OSCAR E. FOX, Reading.

Scientific Exhibit

By Section on Urology

BALLROOM, FIRST FLOOR, HOTEL SCHENLEY

Demonstrators will be in attendance at specified times.

The Bacteriology and Clinical Course of Gonorrhea in the Male.

PERCY S. PELOUZE and FREDERICK S. SCHOFIELD, Philadelphia.

From the Department of Urology, School of Medicine, University of Pennsylvania.

Exhibit consists of posters regarding the bacteriology, immunology, and clinical course, and of cultures and graphic charts of urine trends. The aim is to correct a number of erroneous impressions and to bring out strongly points of most interest to the general practitioner.

Radiograms of Normal and Diseased Seminal Vesicles.

BENJAMIN A. THOMAS, HENRY K. PANCOAST, and FRANCIS G. HARRISON, Philadelphia.

From the Department of Urology and Roentgenology, Graduate School of Medicine, University of Pennsylvania.

Exhibit of seminal vesiculograms, normal and pathologic, illustrative of seminal vesiculitis. Placards depicting the rôle and importance of the seminal vesicles as foci for harboring and disseminating infection provocative of arthritis.

Do not fail to make your hotel reservation early. If you need help, apply to the chairman of the Hotel Committee, Dr. I. H. Alexander, Jenkins Bldg., Pittsburgh, Pa.

OFFICERS' DEPARTMENT

WALTER F. DONALDSON, M.D.
Secretary

SECRETARIES' CONFERENCE

The Twenty-second Annual Conference of the Secretaries of the Component County Medical Societies will be held in the Hotel Henry, Pittsburgh, Tuesday, October 4, 1927, at 5:30 p. m. The conference will be followed by a dinner at 6:45 p. m. The program for the conference will be published in the September JOURNAL.

CHANGES IN MEMBERSHIP OF COUNTY SOCIETIES

The following changes have been reported to July 15:

ALLEGHENY: *New Members*—John W. Stinson, Jenkins Arcade, Theodore S. Swan, Jenkins Arcade, Herbert Monheimer, 5819 Forbes St., James C. W. Ferguson, Jenkins Arcade, George J. Sarraf, 3701 Penn Ave., Pittsburgh; Harry Markowitz, Suburban Hospital, Bellevue; Paul G. Bovard, Corbet St., Tarentum; Frances L. Crothers, 801 Broadway, McKees Rocks. *Resignation*—Hugh R. Gilmore, Emlenton. *Transfer*—William C. Martin, 327 Thorn St., Sewickley, from Washington County Society.

BEAVER: *Death*—George J. Boyd, Beaver Falls (Univ. of Mich. '89), May 29, aged 66.

BLAIR: *New Member*—Benjamin L. Hull, 1219 Thirteenth Ave., Altoona.

BRADFORD: *New Member*—Margaret R. MacMahan, Monroeton.

BUCKS: *Transfer*—Harvey R. Bauman, Champa, C. P. India, from Wayne County Society.

CAMBRIA: *Death*—Albon E. Fichtner, Johnstown (Univ. of Pgh. '07), June 21, aged 44.

CHESTER: *New Member*—Edith Johnson, 113 So. High St., West Chester.

CLARION: *Resignation*—Thomas H. Harter, Culver City, Calif.

GREENE: *Transfer*—Frederick C. Stahlman, Waynesburg, from Washington County Society.

INDIANA: *New Members*—George E. Mitchell, Clymer; William A. W. Switzer, Dixonville. *Death*—Frank F. Moore, Homer City (Medico-Chi. Coll., Phila., '03), June 24, aged 47.

JEFFERSON: *Reinstated Member*—H. B. McGarragh, 3222 Barcelona Ave., Tampa, Fla. *Removal*—Arthur C. McKinley from Corsica to Brookville. *Death*—George Boehm, Marienville (Univ. of Pgh. '01), July 6, aged 54.

LACKAWANNA: *New Member*—Fred S. Huntington, Union Natl. Bank Bldg., Scranton.

LEHIGH: *New Member*—James R. V. Heller, Coplay.

LUZERNE: *Death*—Joseph L. McGinley, Wilkes-Barre (Univ. of Penna. '12), May 18, aged 46.

MIFFLIN: *Death*—Walter S. Wilson, Lewistown (Coll. Phys. & Surg., Balto., '79), June 5, aged 72.

MONTOUR: *New Member*—Kenneth Fowler, Geisinger Hospital, Danville. *Transfer*—Adelbert D. Dye, Danville, from Elk County Society.

MONTGOMERY: *Transfer*—John B. Sherbon, Pottstown, from Dauphin County Society.

MCKEAN: *Death*—H. Irvin Woodhead, Bradford (Jeff. Med. Coll. '96), recently, aged 62.

NORTHAMPTON: *Resignation*—Oscar F. Blank, Allentown.

NORTHUMBERLAND: *Removal*—John H. Snyder from Sunbury to Logan House Annex, Altoona.

PHILADELPHIA: *New Members*—Charles H. Vinton, Box 464, Atlantic City, N. J.; Stephen E. Hutnick, 5933 Lansdowne Ave., Leo F. Bradley, 724 No. 43rd St., Albert Herman, 2135 So. 5th St., John D. McElwee,

Philadelphia Hospital for Contagious Diseases, 2d & Luzerne Sts., Walter S. Nied, 4611 Wayne Ave., Newlin F. Paxson, 1110 No. 63rd St., Edward M. Bevilacqua, 6150 Callowhill St., Philadelphia. *Reinstated Members*—Justin G. Schwerin, 2113 No. 17th St., Robert B. Walker, 1936 Wallace St., Philadelphia. *Removal*—Robert Goodman from Philadelphia to Huntington Mills. *Death*—Edwin Forrest Kamerly, Philadelphia (Univ. of Penna. '91), recently, aged 58.

Schuylkill: *New Members*—Lucus G. McLauchlin, Ashland Hospital, Ashland; Leo E. Pulaski, Shenandoah; William H. Lawlor, Mahanoy City.

Washington: *Removal*—Walter D. Gemmill from Belle Vernon to Monessen (Westmoreland Co.).

York: *New Members*—Evans M. Free, S. Main St., Stewartstown; Henry D. Smyser, 141 E. Market St., James E. Throne, 302 S. George St., York.

PAYMENT OF PER-CAPITA ASSESSMENT

The following payment of per-capita assessment has been received since June 11th. Figures in the first column indicate county society numbers; second column, State Society numbers.

June	18	Schuylkill	156-158	7553-7555	$15.00
	20	Lackawanna	228	7556	5.00
		Tioga	29	7557	5.00
		Chester	74	7558	5.00
	23	Lehigh	117	7559	5.00
		Bucks	64	7560	5.00
	24	Erie	143	7561	5.00
	25	Jefferson	50	7562	5.00
		Bradford		7563	5.00
	30	Northampton	136	7564	5.00
July	8	Chester	75	7565	5.00
		Blair	101	7566	5.00
		Allegheny	1278-1286	7567-7575	45.00
	9	York	128-130	7576-7578 (½ yr.)	7.50
	12	Indiana	56-57	7579-7580	10.00
		Erie	144	7581	5.00
		Blair	102	7582	5.00

COMMITTEE ON SCIENTIFIC WORK

Thomas G. Simonton, M.D., *Chairman*
Pittsburgh, Pa.

PROGRAM OF THE SECTION ON DERMATOLOGY

A practical program from the standpoint of clinical phases of dermatology has been arranged for the Dermatological Section. The program has been divided into a practical exhibit and a scientific session.

The exhibit will be part of the scientific exhibit of the State Society, and will be held on Tuesday morning, October 4th, from 9 until 12:30. In order to refresh the general practitioner in points of differential diagnosis, patients with ordinary skin diseases will be presented, such as eczema, external dermatitis, psoriasis, lichen planus, lupus vulgaris, lupus erythematosis, and syphilitic dermatitis. As this will be an actual case demonstration, of real and practical value, it should attract the attention of the general practitioner, for whom it is specifically arranged. Color, distribution, and configuration of skin lesions will be seen in actual cases, and the interpretation will be given by members of the Pittsburgh Dermatological Society.

The scientific session, which will last three hours, will embrace newer conceptions in the treatment of syphilis, dermatoses resulting from administration of antisyphilitic remedies, and a symposium on tuberculosis of the skin. With the rapid advance in chemotherapy, results have been attained in forms of tuberculosis of the skin which heretofore have been recalcitrant if not totally incurable. This newest form of therapy will be described, and the technic of administration and danger signals associated with it will be discussed fully. One of the most prominent dermatologists of the country, Dr. George Miller MacKee, of New York City, will grace the program of the Section.

PROGRAM OF THE SECTION ON UROLOGY

The new Section on Urology will provide in Pittsburgh in October, at the meeting of the State Medical Society, the most elaborate and comprehensive program on genito-urinary subjects that has ever been presented in the State of Pennsylvania. The interest and enthusiasm manifested in the creation of the Section has been reflected in a thoroughly representative program that should interest general practitioners as well as urologists.

The main feature will be a joint meeting with the Section on Pediatrics in a symposium on "Urologic Conditions in Childhood," in which the most obscure medical and surgical ailments, capable of accurate diagnosis only by up-to-date cystoscopy and pyelography, will be discussed, together with the latest treatment of time-honored enuresis nocturna, by representatives from both Sections, concluded by masterly presentations by the Section guests, Dr. Henry F. Helmholz, of the Mayo Clinic, and Dr. Herman L. Kretschmer, of Chicago.

The second session will comprise three symposia: the first on "Gonococcic Infection" and its complications, including male sterility; the second on "Prostatic Obstruction" and the factors governing palliative and operative treatments and their technic; and the third on the etiology, growth, diagnosis, and treatment of "Urinary Lithiasis." The program will be concluded by a series of unusually interesting urologic case reports.

The Scientific Exhibit will contain an interesting and instructive display of the bacteriology and clinical course of gonorrhea in the male, also radiograms of normal and diseased seminal vesicles and the importance of these as foci of infection in arthritis.

Recreational Features of the Pittsburgh Meeting

L. G. BEINHAUER, M.D.
Chairman of the Publicity Committee

The visiting physician at the coming convention of the Medical Society of the State of Pennsylvania, to be held at Pittsburgh October 3d to 6th, will find many social diversions which will tend to break the strain of the medical programs offered. During this meeting a few innovations will be instituted for the approval of those interested.



JUNCTION OF THE ALLEGHENY AND MONONGAHELA RIVERS

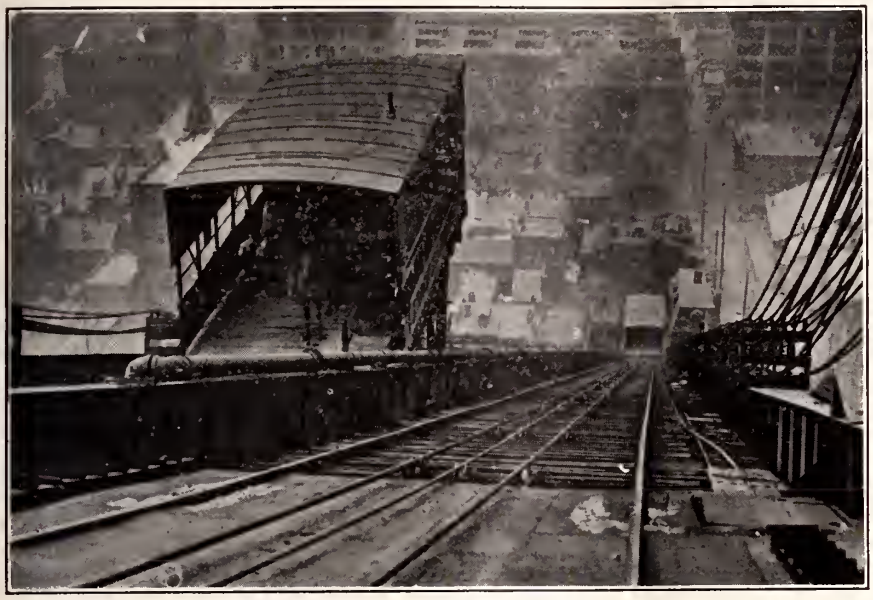
An attempt will be made to organize and formulate plans for a permanent golf association which will be known as the Pennsylvania State Medical Golfer's Association. Inasmuch as golf has become a physician's game, it seems very likely that this will become an added feature and a permanent institution, with a championship tournament played yearly at the place of the State Society meeting. The feature of the coming convention will be a one-day tournament for the title of champion of the Pennsylvania State Medical Golfer's Association. This will be decided by a low-score contest with no handicaps, inasmuch as it will be a true championship affair. An appropriate cup will be presented to the winner, in whose possession it shall remain until the next State meeting. In addition to this there will be a prize awarded for the best net score and also a prize for the best match play against par under handicaps in other arranged competitions. The handicaps will be taken from the handicap assigned by the home club of which the entrant is a member or from the State handicap rating. For this reason applications for the tournament should be mailed at once to the temporary chairman, Dr. George J. McKee, Westinghouse Building, Pittsburgh, Pa., at the earliest possible moment in order that the handicaps and other details may be arranged.

An urgent request has been made by the



THE CARNEGIE INSTITUTE OF TECHNOLOGY, PITTSBURGH

chairman for your hearty coöperation. All golfers take notice; give this your early attention, and forward your entry at once. Special attention is called to the fact that no green fee will be charged to members of the State Society outside Allegheny County, but members of Allegheny County Medical Society will be required to pay the nominal green fee. It is the hope of all interested that full support will be accorded this movement, so that this may become a yearly feature at our future meetings. At present no club has been selected for the tournament, but an early announcement with further details will be forthcoming.



MONONGAHELA INCLINE PLANE
Running from Carson Street to the top of Mount Washington, Pittsburgh

Due to the fact that many members of the Allegheny County Medical Society are members of the various country clubs in the vicinity, arrangements can easily be made to play on the various courses. In and about Pittsburgh are numerous well-known and equally well-trapped courses: such as, Oakmont, over which the recent open championship of 1927 was played, Pittsburgh Field Club, Stanton Heights, Highland Club, Fox Chapel, South Hills, St. Clair, Thornburg, Allegheny Country, and numerous others offer courses that will test the skill of all visiting golf enthusiasts.

The opportunity to visit various points of interest in and about Pittsburgh awaits those who are interested. A few hours visiting the Heinz plant on the North Side will be well worth while. There are visiting hours daily, and guests will be accorded the utmost attention. A trip through the Westinghouse plant at East Pittsburgh or the steel mills at Homestead or Duquesne can be arranged for, if sufficient demand is created. A few hours spent visiting the Carnegie Library and Museum or the Phipps Conservatory adjacent to the headquarters will offer abundance in return for the little effort expended. Those interested in baseball will be handy to Forbes Field, the home of the Pirates (the Pittsburgh National League entry for the 1927 baseball championship). Those seeking scenic beauty can have their desires fulfilled by taking advantage of the excellent roads



THE OLD BLOCK HOUSE (FORT PITT)
Located on Penn Avenue near the junction of the Monongahela and Allegheny Rivers

which pass through the mountain districts of the county. A trip through the residential section of the city will also be appreciated by those interested. For real experiences the visitors are asked to ride the inclined planes of the city and to inspect the tunnels which bore through our mighty hills as an outlet for accelerating traffic.

The time of the meeting is drawing close. Arrange your practice so that you can avail yourself of the opportunity of visiting Pittsburgh during the coming convention. Do not forget to write early for hotel accommodations as they are rapidly being taken. Make your visit to Pittsburgh a social as well as a medical obligation.

Cuts by courtesy of Kramer's Restaurant.

County Society Reports

ALLEGHENY—JUNE

At the regular monthly meeting held June 21st the following scientific program was presented:

Dr. F. L. Schumacher: Nontuberculous Diseases of the Chest.—Watkins' scheme is advocated, classifying the groups as follows: (1) disease not originating in the lung—cardiac, cardiovascular, cardiorenal; (2) noninfectious—tumors, pneumoconiosis, foreign bodies; (3) infection—pneumonia, postinfluenzal conditions, mycosis, and syphilis.

Cardiac lesions, particularly the mitral, are the commonest causes of increased pulmonary vascularity, and are met in all gradations. Cardiac anomalies can closely simulate apical infections. Pulmonary infarcts, the majority of which are right-sided, often complicate the picture, simulating pneumonia, but have a more defined, more dense localization. Pulmonary fibrosis due to dust-particle inhalation is the nearest approach to the roentgen picture of tuberculosis. Chronic bronchitis, from the standpoint of the roentgenologist, does not exist.

Foreign bodies always present difficulties, as the picture may not differ from an unresolved pneumonia, except that there is less fibrosis and mottling. Primary pulmonary neoplasms present the greatest problems of diagnosis. They usually originate at the hilus. Early in their development, they may simulate glands or hilus fibrosis or even mediastinal tumors. Secondary neoplasms are more common and easier to recognize, but there is no recognizable difference between carcinoma and sarcoma. Pneumonia is the most important of the acute infectious processes. Bronchiectasis is probably more common than supposed. The term "influenzal pneumonia" is misleading, inaccurate, and nondescriptive, and pneumonitis would seem more to the point. Lung abscesses may closely simulate the picture of bronchiectasis, but sooner or later the cavity is formed. With the advent of lipiodol the chapters on bronchiectasis, lung abscess, and pulmonary gangrene must be rewritten. Syphilitic disease of the lung should be considered a clinical entity in spite of the paucity of autopsy records. It attacks the lungs in the late stages of the disease, and is charactertized by new tissue (fibrous) formation. A diagnosis from the roentgen film *per se* should be made.

Dr. John W. Boyce: Long-Duration Influenza.—In reviewing the cases, the author by careful hindsight was convinced that final diagnosis was made upon x-ray findings, and he advocates early and more thorough use in order that greater confidence may be given this procedure. For this condition—acute influenzal lung pathology—the term pneumonitis has been proposed. The term has not been generally adopted, and those few who adopted it seem to think it is a synonym for pneumonia intended to introduce a confusion that shall mask diagnostic ineptitude and hazy notions of pathology. Roentgenologists have suffered from the lack of such a term. They have no word for a shadow that is denser than that of any congestion and yet not dense enough to indicate the hepatization that is implied when we use the word pneumonia. The studies of Shelby, of Akron, at the Walter Reed Hospital during the early stages of an influenzal epidemic, should be reviewed by all roentgenologists.

Dr. J. Homer McCready: Pneumonography.—A bronchoscopist should work only in conjunction with the internist and roentgenologist. The instillation of lipiodol into the lung by the bronchoscopic route has certain advantages and less dangers than other methods. Infection and poisoning from dropping an excess are avoided. Abscess cavities can be drained, strictures dilated, oil dropped into desired areas, granulations removed, pathology clearly visualized, and cultures easily obtained without contamination, and 90 per cent of patients can leave the hospital after the plates have been made. The procedure is carried out under local anesthesia. It is a check-up when ordinary x-ray pictures give no detailed information about the presence or absence of bronchiectasis or lung abscess.

Dr. C. Howard Marcy: Pneumothorax in the treatment of nontuberculous lung diseases.—The use of artificial collapse of the lung as a therapeutic procedure has not been accepted for nontuberculous infections of the chest. The value of this procedure in lung abscess depends upon location of the lesion, type, and chronicity, and success is expected only in a reasonably acute condition in which the pleural space is free and there is a communication between the abscess cavity and the bronchus. A review of twenty cases selected for this procedure was reported, and the author concluded that pneumothorax is of some value in certain types of these cases. Its use is limited and appears justifiable before using radical procedures.

Of the series, 16 were cases of lung abscesses and 4 of bronchiectasis. In the 16 abscess cases, 4 patients made complete recovery, 6 showed improvement, 4 were unimproved, and 2 died.

L. G. BEINHAUER, M.D., Reporter.

BLAIR—JUNE

The regular monthly meeting of the society was held in the Altoona Hospital, Tuesday afternoon, June 28.

Drs. Geo. E. Alleman and G. D. Bliss presented moving pictures showing various types of gastric ulcer, intestinal peristalsis in living organisms; also pictures of the Blair County Medical Society outing of last year.

The pictures on various types of gastric ulcer illustrated six different varieties, as follows: ulcer of the mucosa; ulcer of mucosa and submucosa; ulcer of mucosa, submucosa, and muscular coat; ulcer of pouch-like nature; ulcerating ulcer; and delaminating ulcer. The classification is based on the structure of the stomach wall, which consists of mucosa, submucosa, and muscular coats. Illustrations were shown depicting how each type of ulcerated stomach looked to the sur-

geon who sees the exterior, and how the same condition appeared to the roentgenologist who sees the inside of the stomach. In most instances the organ looks perfectly normal on the outside, but the x-ray discloses an ulcer.

The ulcers are of all sizes and shapes, and are nearly always located on the lesser curvature of the stomach wall near the pyloric end. Those of the mucosa are not attached to the stomach wall, and ride the peristaltic waves. Those of the mucosa and submucosa are attached to the muscle wall, and remain stationary. Delaminating ulcers extend through the submucosa, separating the mucosa from the muscular wall. The chief object of the film was to show a classification of the various types of ulcer and to emphasize the importance of diagnosing the type before deciding upon what form of treatment to pursue.

Dr. R. O. Gettemy read a short paper on dietotherapy in the treatment of pernicious anemia. The chief point brought out in the paper was that patients with pernicious anemia do better on a high protein diet, of which liver and kidney are the proteins of choice. Diets consisting largely of carbohydrates are not suitable in anemia cases. Of twenty-seven cases of pernicious anemia treated on a high protein diet and liver, all showed a marked increase in the number of red cells and many showed practically a normal red-cell count after five to six weeks of treatment.

R. V. Silknetter, M.D., Reporter.

NORTHWESTERN PENNSYLVANIA—JULY

The annual meeting of the Northwestern Pennsylvania Medical Association was held at Erie, July 8. About 125 physicians, members of the Erie, Warren, Venango, Crawford, Mercer, Clearfield, and Clarion County Medical Societies, were present. Seventy-five ladies accompanied them, and all assembled at dinner in one large hall of the newly built Lutheran Church. After dinner the women left for an auto trip about the city and lake, ending at a club house, where refreshments were served.

The physicians met and were addressed by Dr. Allen A. Jones, of Buffalo, N. Y., professor of medicine at the University of Buffalo Department of Medicine. He reviewed a number of unique case histories, outlining the treatment and symptoms. In one case that had all the earmarks of renal disease, with albumin, high casts, edema, dyspnea, gallop rhythm, and low function, but with urea concentration normal, all of the symptoms disappeared when the myocardium was strengthened by oxygen and strophanthus, and as the congestion disappeared, the patient was found to have mitral stenosis rather than renal disease.

A patient having hypertension with arteriosclerosis which had resisted all ordinary treatment, was much benefited by an almost absolutely salt-free diet and small doses of sodium sulphocyanate, one grain three times daily.

Another case reported was one of sudden death following a gastro-enterostomy in which insulin had been used to prepare the patient because of concurrent diabetes, and at autopsy a right coronary thrombosis was found with marked hypertrophy, or rather congestion of the liver. If there is no enlargement of the liver or of the right side of the heart, the thrombosis will usually be found in the left coronary, but if the above lesions are present, the diagnosis is apt to be a right coronary thrombosis.

Dr. A. C. Morgan, president-elect of the State Society, was present as a guest. He commented on Dr. Jone's cases, and especially urged the members to remember the capillary system when thinking of cardiovascular disease; that one should speak of arteriocapillary sclerosis rather than arteriosclerosis. Profuse salivary discharge is often an indication of interference with pancreatic excretion, and should lead one, in the absence of pathologic change in the salivary glands, to suspect malignant disease of the pancreas.

Dr. Morgan then gave a report of medical legislation at the last session of the Legislature. He hoped that the new mixed commission appointed by the Governor would bring about results that the State Society alone could not accomplish. He praised the work of the Woman's Auxiliary in the last campaign, and hoped that each county would organize a branch. Dr. Morgan is a very capable speaker and the physicians were greatly impressed with his practical remarks and common-sense views.

Dr. O. H. Jackson, of Meadville, was chosen for president; Dr. F. E. Ross, of Erie, for vice-president; and Dr. M. V. Ball, of Warren, secretary-treasurer.

M. V. Ball, M.D., Reporter.

PHILADELPHIA

June 8, 1927

BRANCH NIGHT

South Branch.

Dr. Eugene C. Murphy: Gangrene of the Forearm due to Embolism of the Brachial Artery; Amputation, and Cure.—We find embolism of the peripheral arteries in patients with valvular heart disease or disease of the aorta. Emboli of the systemic circulation often lodge in the lung, while emboli arising in the left heart, aorta, and systemic arterial circulation lodge in the brain, kidneys, spleen, and peripheral arteries. Emboli in the portal vein lodge in the liver, causing hepatic embolism and abscess. Paradoxical embolism has been described wherein, after hysterectomy, autopsy revealed pelvic vein thrombosis and a large, patulous foramen ovale in the heart.

Case Report: A white woman, aged 78, was admitted to the hospital suffering from dry gangrene of the right hand and forearm up to one and one-half inches below the bend of the elbow, with no line of inflammatory reaction connected with the line of demarcation. No pulse could be felt at the radial or ulnar arteries, and she had no sensation in hand or forearm. With nitrous-oxid-oxygen and a local anesthetic (novocain, 2 per cent) injected into the brachial plexus, circular amputation of the upper third of the right arm was performed. The stump was drained with two rubber tubes, and the wound closed with silkworm sutures. The x-ray of the injected arm showed a break in the continuity of the brachial artery at the bifurcation, and no fluid entered the forearm more than two inches below the head of the radius. Dissection showed a U-shaped thrombus in the radial and ulnar arteries.

Kensington Branch.

Dr. Wm. J. Ezickson: The Rôle of Urology in Present-Day Medicine.—The speaker showed the value, and often the necessity, of a complete urologic study, especially in cases with vague symptoms. Urologic examinations done earlier in the study of the patient will exclude many unnecessary operations. There is a large group of patients whose symptoms refer to the upper gastro-intestinal tract, but whose pathology is in the urinary tract—kinks of the ureter and hydronephrosis, pyonephrosis, calculosis, tuberculosis, etc. Abdominal

sections are done on such persons too often without relief of symptoms. Case reports were detailed.

WEST BRANCH.

Dr. Norman L. Knipe: The Progress of Obstetrics in Relation to Modern Life.—In the last thirty years the term "obstetrician" has taken on a new meaning, and the scientific part of obstetrics has become more pronounced. Not only normal, but abnormal cases can now be delivered, and with a knowledge of pathology and surgery has come freedom. The greatest advance in obstetrics has been the cesarean section, and so much favor has it gained that there is danger that the art of obstetrics may be considered a waste of time. Potter's version has won by the finished perfection of its technic. With all its advance, however, the obstetric art is far from perfected, for the mortality from all puerperal causes in 1920 was 6.8 per thousand live births; in 1925, 6.5. The cities of 100,000 having the highest rates in 1924 were Camden, Scranton, Washington, D. C., and Spokane. The lowest rate, 4.2 per thousand, occurred in St. Paul. Of the large cities, Philadelphia had the highest rate—7.2; then Chicago, 6.5; New York, 5.8; and San Francisco only 4.6. More than half the mortality arises from puerperal septicemia. It would seem, therefore, that the newly made doctor should be invited to join the obstetrical department as a dispensary assistant, then progress to the staff with circumscribed and original work, then to lectures to students, then to care of septic cases. By such a stepping-stone system we could hope to develop obstetricians.

NORTHEAST BRANCH.

Dr. F. E. Keller: What is the Cause of Eclampsia?—This question is unanswerable in the light of our present knowledge, and until the etiology is known the treatment must be more or less empirical, leaving much to be desired in results.

SOUTHEAST BRANCH.

Dr. A. I. Rubenstone: Upper-Abdominal Symptoms Due to Urologic Disease.—Atypical and contradictory symptoms occur in the upper abdomen because of the variety of vital organs situated under the dome of the diaphragm and their close interconnection by the sympathetic nervous system with other distant organs. A careful history and a complete physical examination are of the utmost importance. We have made strides in the last decade with the x-ray, the clinical laboratory, liver-function tests, cystoscopy, and pyelography; yet despite these refinements, diagnosis is often difficult. Excessive specializing, misleading highly sensitive tests, and faulty x-ray technic increase our mistakes; nor should we indict one tract alone until all possibilities have been ruled out. Many patients are unimproved after operation and adhesions are blamed, whereas a ureteral stone may be the offending factor. Gastric distress, renal colic, the passage of a calculus—all may be confused. Hunner established the close connection between ureteral pathology and upper-abdominal symptoms. Every patient should be submitted to cystoscopic study when there is upper-abdominal pathology without sufficient evidence, for inadequate ureteral drainage with stasis and infection or hydronephrosis are usually to blame. Much urinary pathology may exist without reference to the tract further than a trace of albumin, a few leukocytes, or nocturia.

MARY A. HIPPLE, M.D., Reporter.

YORK—JULY

At the meeting of July 7th, with Dr. E. S. Stambaugh, the president, in the chair, Dr. George M. Piersol, of Philadelphia, delivered an address on "Some of the Visceral Manifestations of Syphilis."

He stated that the following effects were noted in the cardiovascular system: (1) *aorta*—(a) acute aortitis, (b) chronic aortitis due to a localized lesion or a generalized sclerosis, (c) aneurysm, caused in practically all cases by syphilis, except in mycosis due to infection; (2) *heart*—(a) fibrous myocarditis, (b) gummata, and (c) chronic endocarditis, generally an aortic insufficiency. The three main lesions are mesarteritis, aortitis, and aortic insufficiency.

Respiratory system—Mucous patches are found in the larynx; gummata, ulcerations, scars, and contractures that result in stenosis are found in the bronchi. In the lungs, the congenital form (the white lung) is common; and the acquired form occurs as either gummata, catarrhal inflammation and consolidation, or chronic fibrosis.

Gastro-intestinal tract—The esophagus and stomach are rarely affected. Gummata, amyloid degeneration, and ulcerations occur in the small intestine. The most common lesion is ulceration in the rectum. The liver is affected in the primary and tertiary stages. The latter occurs in four forms—focal gummata, scars, diffuse hepatitis, and amyloid changes. The spleen is rarely involved. Fibrosis occurs in the pancreas and may cause diabetes. The kidneys are affected in the secondary stage, when an albuminuria is produced which subsides in a few months. Chronic nephritis may also result during the tertiary stage.

Syphilis is a general acute and chronic infectious disease, and any of the viscera may be involved.

MILTON H. COHEN, M.D., Reporter.

The Woman's Auxiliary of the Medical Society of the State of Pennsylvania

THE WOMAN'S AUXILIARY AT THE PITTSBURGH SESSION

Where the waters of the Monongahela, warmed in the Southlands, meet with the mountain-cooled streams of the Allegheny to form the majestic Ohio; where the last Block House of old Fort Duquesne stands sentinel over the supremacy of English-speaking races in America; where an eternal sunset thrown on the clouds from the open hearths of her steel mills flames in the midnight sky; nested in the foothills of the Alleghenies, lies Pittsburgh.

Over steel rails, which have been poured, white hot, from the caldrons of her mills, into the city which holds the mystery, the romance, the glory, of the birth of steel, you will come for this convention of the Woman's Auxiliary of the Medical Society of the State of Pennsylvania.

To our city, which one lover of Pittsburgh has called, the "City of Homes," to our "Main Street," old Penn Avenue, over which General Forbes and Colonel Washington marched down to the Fort on the Point, we wait to welcome you on Monday, October 3, 1927.

Headquarters for the convention have been secured in the Oakland District, the educational

center of Pittsburgh. The Pittsburgh Athletic Association, at which the women attending the convention will have headquarters, faces on Fifth Avenue and Bigelow Boulevard. It is an immense square white stone building with such simplicity and beauty in design that it stands distinctive among a group of buildings in this vicinity. In this building the women will find every detail arranged for their convenience. Here they will register and receive tickets and information regarding all meetings and social affairs of the week.



PITTSBURGH ATHLETIC ASSOCIATION
Headquarters for the Woman's Auxiliary during the 1927 Session.

Diagonally across the street is the Hotel Schenley, headquarters for the physicians of the Medical Society of the State of Pennsylvania. Here also will be arranged a desk where visiting wives, mothers, daughters, and sisters of the physicians may register. All women, whether members of the Auxiliary or not, are urged to register either at the Hotel Schenley or at the Pittsburgh Athletic Association, so that they may enjoy the many delightful activities arranged for their entertainment.

On Forbes Street, seen from both the Athletic Association and the Hotel Schenley, is Carnegie Museum, a wonderful building, filled with such marvelous collections of the arts, the sciences, and the handiwork of God, that Europeans are advised, ere leaving their countries, that in this museum is to be found one of the wonder collections of the world.

On the hills north of the Athletic Association, the buildings of the University of Pittsburgh rise white against the sky-line. In the opposite direction, over the roofs of Carnegie Library, may be seen the buildings of Carnegie Institute of Technology. In these two schools, "Pitt" and "Tech," rests the foundation of the future educational center of Western Pennsylvania.

The president of the Woman's Auxiliary of the Allegheny County Medical Society, Mrs. John F. McCullough, with her staff, has practically completed plans for the entertainment of all women attending the convention. A delightful program has been arranged, beginning on Monday, October 3rd with the State Auxiliary Executive Board Dinner at 5:30 p.m. in the Pittsburgh Athletic Association.

On Tuesday and Wednesday morning at 9:30 in the State Room of the Athletic Association, business meetings of the State Auxiliary will be held. These are open meetings and all visiting women are urged to attend.

At 2 o'clock on the afternoon of Tuesday,

October 4th, in the Ball Room of the Athletic Association, Dr. John L. Davis of New York City will address an open meeting of the Auxiliary. Dr. Davis is a nationally known entertainer and has been selected to address the members of the Medical Society later in the day.

A drive to the summer home of Dr. and Mrs. Edward B. Heckel for tea will start from the Hotel Schenley at 2 p.m. Wednesday. This beautiful home nestled in the hills above the Ohio, commands a wonderful view of the Ohio Valley and Pittsburgh clearly visible at a distance of ten miles.

Wednesday evening, plans are identical with those of the State Medical Society. Dr. Morris Fishbein of Chicago, editor of the *Journal of the American Medical Association,* will address the public meeting in the University Club at 8 o'clock. The President's Reception and Ball, also at the University Club, will follow immediately after this meeting.

The Pittsburgh Field Club, one of the most beautiful of our Country Clubs, will be the site on Thursday of an all-day party with lunch at noon and bridge during the afternoon. The location of this club, the beauty spot of the surrounding country, the clubhouse itself are well worth the drive out, even though no lunch were in sight. Busses will leave the Hotel Schenley at 11 a.m.

Arrangements have been made to use new luxurious busses, fitted with pneumatic tires and air-cushioned seats, for all transportation. These cars will seat seventeen very comfortably, and will be in charge of competent drivers.

The Entertainment Committee during the convention will consist of the officers, directors, members of standing committees, and members of the Woman's Auxiliary of the Allegheny County Medical Society.

MRS. DAVID B. LUDWIG,
Chairman, Publicity Committee.

CONCERNING ENTERTAINMENT FOR VISITING WOMEN

The entertainment of all visiting women during the Pittsburgh session will be in charge of the Woman's Auxiliary of the Allegheny County Medical Society.

The officers and committees of the Auxiliary have been working constantly and faithfully for some time past to make this feature of the session a success, and are eager that all women accompanying members of the State Society, register promptly upon their arrival, either at the Hotel Schenley or the Pittsburgh Athletic Association.

The schedule, as outlined in Mrs. Ludwig's communication, represents practically the final arrangements of the Auxiliary committees.

The committee on Arrangements heartily recommends the program as planned, and assures all members of the State Society that every possible effort will be expended by the Woman's Auxiliary of Allegheny County to entertain their visitors.

ROBERT L. ANDERSON, M.D.,
Chairman, Committee on Arrangements.

COUNTY AUXILIARY REPORTS

LEHIGH

The regular meeting of the Auxiliary was held at the home of Mrs. Harry E. Klingaman, Emaus, June 21, at 2 p.m. There were forty members present at a short business meeting, after which they enjoyed a pleasant afternoon at cards and a delightful luncheon served by the hostess.

Mrs. Klingaman, the president, presided at the business session and gave a detailed report of the American Medical Association convention held in May at Washington, to which she was the local delegate. Following the report, plans were made for the July and August meetings. The July meeting is to be held at Shankweiler's Inn. For the August meeting, the Auxiliary is invited to a clambake to be held at Dr. Joseph M. Weaver's farm.

Winners of favors at bridge were: Mrs. W. D. Masonheimer, Mrs. Ralph Merkle, Mrs. Frederick Herbst, and Mrs. V. J. Gangewere; at "500," Mrs. August Hendricks, Mrs. S. Mann Uhler, Mrs. Aaron Weaver, and Mrs. Charles Schlesman.

During the luncheon period, music was furnished by an instrumental trio, consisting of Miss Madeline Weidner, piano; Miss Elsie Culver, violin; Miss Lucille Klingaman, 'cello.

The Auxiliary contributed $25 to the cause of the Mississippi Flood Fund of the Red Cross.

MRS. W. A. HAUSMAN, JR.

LYCOMING

An Auxiliary meeting was held at the home of Mrs. A. F. Hardt, in Vallamont, on June 10th. A buffet luncheon preceded the meeting, Mrs. Hardt acting as hostess. Following the luncheon a social hour was enjoyed.

At this meeting, Mrs. L. E. Wurster presiding, routine business was transacted, and Mrs. W. Eugene Delaney was appointed chairman of the membership committee. Plans for a picnic were made to be held at Muncy, Pa., August 3d, at which time members of the Medical Society are to be invited as guests.

Mrs. Edith Ellicott Powers, a State representative of the Federation of Birth Control, addressed the members during the afternoon. She outlined the work as carried on in New York and told of plans being made for better legislation in Pennsylvania. Every one present enjoyed the interesting and illuminating talk concerning a subject we know so little about.

A rising vote of thanks was given Mrs. Hardt for her most generous hospitality.

MRS. ERNEST T. WILLIAMS.

THE

MEDICAL SOCIETY OF DELAWARE

PROGNOSIS IN PNEUMONIA*

P. W. TOMLINSON, M.D.
WILMINGTON, DEL.

Factors Affecting the Prognosis of Pneumonia

(1) The Malignancy of the Infecting Organism.—Prognosis depends very largely upon the virulence of the infecting strain, the presence of bacteremia, and the result of the toxemia. Dochez found that 77 per cent of the patients with positive blood cultures died, and 70 per cent of those with negative blood cultures recovered, and that in individuals dying of pneumonia without evident blood infection, there was a rapid spread of the local process in the lungs. Rosenberger and Dorworth found that of their patients whose blood cultures showed pneumococci, 54 per cent died, while 50 per cent of those who died showed no blood contamination. Walstein and Meltzer found that improvement and a favorable termination after the crisis occur without material change in the structures involved in pneumonia. There is very likely, at the time of crisis, a change in the character of the toxins of the pneumococcus. Cole says there is "a neutralization of the intoxication rather than a destruction of the bacteria existing within the body."

(2) The Effect of the Toxemia and the Associated Local Lung Lesion on the Cardiovascular System.—The effect of the toxemia on both heart and vasomotors must be considered, for the prognosis depends largely upon the baneful influences which the toxins exert upon the vasomotor centers in the cord. Experiments on the rabbits inoculated with the pneumococcus and the Bacillus pyocyaneus proved conclusively that the vasomotor system was weakened and showed evidence of paralysis. Primarily, the toxemia leads to cardiac asthenia and vasomotor paralysis, to which must be added the changes in the right half of the heart, the far-reaching degenerative changes in the myocardium, the heart clots, and the mechanical obstruction in the pulmonary circuit.

Daily blood-pressure records are of great prognostic value. A systolic blood pressure much below normal is unfavorable; any great fall is ominous. Clinical experience proves that with falling blood pressure, lowering pulse amplitude, and increasing pulse rate, the prognosis in all pneumonics is unfavorably influenced. Pneumonia complicated by arteriosclerosis and chronic nephritis in which the blood pressure remains abnormally high for a day or two offers an unfavorable prognosis in most cases. An abnormally high blood pressure, with a slow, tense, thick pulse early in the case is always of serious significance.

(3) The Resistance Offered by the Patient.—The mortality of pneumonia during the first year of life is high, from the second year to puberty it is comparatively low, from 35 to 40 it is high, from 60 to 70 three-fourths of all pneumonics die. The association of diseases of the heart, lungs, kidney, or other separate systems which handicap the functioning of the organs adds enormously to the danger of pneumococcus infection. This is particularly true of metabolic disturbances and arteriosclerosis (Elsner). The obese have a reduced resistence, and melt away rapidly with symptoms of cardiac asthenia and nervous manifestations. Diabetics, when infected with pneumonia, offer an exceedingly grave prognosis. The majority of these cases are atypical, and present complications which add to the dangers.

The negro is more subject to the infection than the white man. Inhabitants of the tropics, whether at home or in other climates, show a decided tendency to lung inflammation, and have a lowered resistance. According to an interesting report to the Rand Native Labor Association, the blood of the African native, and especially the tropical native, differs from that of the European in being incapable of developing a so-called bactericidal power toward pneumonia germs, and is inferior to it in respect of its "immunizing response," or ability to produce antibodies which shall prevent the hostile germs from becoming established in the body.

Pneumococcus infections represent from three to seven per cent of the morbidity of the

*Read before the Sussex County Medical Society at Lewes, Delaware.

civilized races. Those who live in the open air are less susceptible than those who live in poorly ventilated or close quarters, and they offer greater resistance when infected. The disease is more frequent among workers who are exposed to storm and wet. The excessive use of alcohol is a factor of enormous weight in inviting pneumococcus infection, and powerfully influences the prognosis. Contusions of the thorax, or perforation of the wall are frequently followed by traumatic pneumonia. All experience proves the greater frequency of the disease among men than women, unquestionably due to the greater exposure of men to the hardships of life and inclemencies of the weather. The disease shows a large mortality among the mentally defective; the higher the grade of these, the lower the death rate. Pregnant women offer strong resistance to pneumococcemia, but when infected, the prognosis is grave, and abortion is likely to result.

There are cases in which there seems to be a predisposition to the disease. Often the type proves to be abortive, but not infrequently the patient succumbs to a second or third infection. The prognosis is more unfavorable in endemic cases where several members of a family are stricken at the same time. There is apparently greater virulence of the infecting strain. Immunity following pneumonia is short-lived. One infection tends to lower the resistance against future infection, and invites subsequent attacks. Unfavorable surroundings—dust, gases, poor ventilation, continuous dampness, faulty nutrition, lowered resistance—invite the disease, and the infected offer a more unfavorable prognosis than do those whose environment has been more favorable. Seasonal influences affect resistance and prognosis. The disease is most prevalent during the first four months of the year, and it is during these months that the prognosis is least favorable.

(4) The Extent of the Pulmonary and Associated Lesions.—In the majority of cases the extent of the lung consolidation influences the prognosis materially, particularly in double pneumonia. On the other hand, in many cases the area of infiltrated lung tisssue bears no relation to the gravity of the disease. There are malignant infections which offer the gravest prognosis, in which only a limited part of one lung is involved. It is never safe to offer a prognosis from the extent of consolidation alone. Associated lesions are powerful factors, and influence the results greatly.

Interpretation of Signs and Symptoms

Temperature.—The graver infections are associated with a severe initial chill. Two or more chills are unusual, and if these recur at short intervals during the first day a malignant infection may be suspected. Chills are usually absent in children, but convulsions not infrequently indicate the gravity of the case. In 14 per cent of cases in adults the initial chill is absent—commonly so in alcoholics or in the aged or enfeebled. In the aged, without chill, the disease is of the asthenic type, and the mortality is very high. In 70 per cent of influenzal pneumonias there is a severe initial chill. When this occurs, the disease is of shorter duration than when the chill is absent. Most of these patients recover completely. In many, mixed infection is found, usually pneumococcus and streptococcus.

Under no conditions is the prognosis of pneumonia to be dependent upon the revelations of the thermometer. There are malignant cases in which the temperature is continuously low (101 and 102 degrees) with marked asthenia and limited consolidation. Many of these cases run atypical courses and are uninfluenced by treatment, the heart showing increasing weakness from day to day. Some are of the migratory type in which there are fresh exacerbations with marked adynamia. Most of these die in the course of two to three weeks. Study of the temperature is never to be divorced from consideration of other specific symptoms and the general condition of the patient. Early high temperature without heart weakness is not unfavorable, and is more favorable than after the third to the sixth day unless at that time it is transitory and is followed by a decided fall and profuse sweat. A sudden rise after the fifth day, after lysis has commenced, or persisting after the crisis, is an indication of an added complication. In the majority of cases in which the temperature remains continuously high, uninfluenced by any treatment, there are other symptoms proving the malignancy of the infection. Fall of temperature to normal or slightly above, with increase of respiratory embarrassment, cyanosis, feeble pulse, lowering blood pressure, and thin, pink, watery, and profuse sputum, large and small moist râles generally distributed, is fatal in over 90 per cent of cases.

Subnormal temperature continuing for 24 to 60 hours after the crisis is favorable, provided other conditions are equally encouraging. A sudden fall of temperature with a continuously rapid and weak pulse and without a true crisis is not favorable. Prompt and complete crisis is always better than a slow lysis. So-called unresolved pneumonia is, as a rule, due to some discoverable complication, such as empyema, abscess, thrombosis, or tuberculosis. Afebrile pneumonia in the aged is always serious, and

may be associated with grip, arteriosclerosis, or renal complications. There is great danger of sudden heart weakness and overpowering toxemia. When both pneumococcemia and uremia are present, the temperature is not likely to be high, but death is usual between the tenth and fourteenth days.

Circulation.—The fight for life succeeds or fails in accordance with the ability to influence the circulation favorably during the active stages of the disease. The paramount factor is the heart; upon its ability to resist the effect of the pneumococcemia largely depends the fate of the patient. The association of an enfeebled heart with dilated peripheral vessels is always a serious feature. Right-heart weakness depends upon the extra burden thrown upon the right ventricle by the mechanical obstruction within the pulmonary circuit and the effects of toxemia; hence the prognosis is worse when the consolidation is extensive in the presence of dilatation of the right heart. When, with the weakness of the right heart, the liver and spleen are enlarged and there is marked meteorism with albuminuria, casts, and a reduced quantity of urine, the outlook is bad. Cyanosis at any stage, with air hunger, hurried respirations, rapid, feeble pulse, and lowering systolic blood pressure, is among the most dreaded of all symptoms.

Previous disease of the heart handicaps the pneumonic, and is always a factor in prognosis, as it offers less resistance to infection than the normal organ. Much naturally depends on the associated conditions. A persistently rapid and small pulse from the beginning, with progressively decreasing blood pressure in the presence of constitutional and local symptoms, is an expression of heart weakness and justifies the greatest anxiety. Increasing rapidity of the heart on the third and fourth day with evidences of fresh invasion, hurried and unimproved respiration, scanty albuminous urine, and deep involvement of the sensorium, is a serious condition. Irregularity of a previously normal heart before the crisis and during the first two stages of the disease is evidence of myocardial involvement. Irregularities during convalescence, with a normal temperature and relief of the inflammatory process, yield after rest, and do no damage. Collapse during the acute stages is one of the dangers to be dreaded. This may be due to sudden flooding of the blood with toxins or endotoxins, to sudden acute dilation of the heart, pulmonary thrombosis, or embolism. Not all such conditions prove fatal. Timely stimulation and absolute rest save many lives.

The Respiratory System.—Severe pain, referable to the pleura of the inflamed lung, which persists after the first twenty-four hours, with rapid pulse and thin, bloody sputum, is evidence of a severe pneumonia. Dyspnea is dangerous when it depends upon diffuse bronchiolitis, edema of the lungs, the consolidation of unusually large areas of lung tissue, or myocardial weakness or degeneration, with dilatation of the right heart.

Marked disproportion of the pulse and respiration is always unfavorable. Respirations of 40 to 50 per minute, with corresponding increase of the pulse and fall of blood pressure, offer a doubtful forecast. Respirations from 50 to 70, with other symptoms of corresponding severity, are found only in malignant cases. According to Pye-Smith, "An increased rate due to causes local in the lungs is important in diagnosis and unimportant in prognosis; and when it is caused by toxemia, exactly the opposite is true." Cheyne-Stokes breathing is evidence of deep poisoning and heart incompetence.

Hypostatic congestion of the dependent lung is an almost constant accompaniment of pneumonia. In severe and fatal cases it is fully developed, is an expression of heart weakness, and in turn throws an extra burden on the overtaxed organ.

Persistence of bloody sputum without improvement of constitutional symptoms, including fever and rapid pulse, demands a cautious prognosis. Excessive and thin sputum, with marked dyspnea, hurried respirations, and cyanosis, is proof of respiratory embarrassment and edema, making the outlook exceedingly grave. Orthopnea and superficial irregular respiratory movements without ability to expectorate, large râles, and noisy breathing are evidences of the terminal stage of heart incompetence. Free expectoration is of great assistance. The most dangerous period of pneumonia includes, besides increasing heart weakness, the inability to cough, with accumulation of exudate and secretion in the bronchi.

The Blood.—While, in pneumonia, diminution in the carbon-dioxid content of the blood is usual, occasional cases fail to show it, and Peabody claims that it bears little definite relation to the severity of the disease, except that it tends to be lowest in severe cases and in the terminal stages of the disease.

Hekton says that "the cure of pneumonia results from the destruction of the pneumococci in the lungs and in the blood. This is accomplished by phagocytosis and also by extracellular digestive processes. The predominating general defensive reactions in pneumonia are leukocytosis and the production of antibodies for

pneumococci, of which the opsonins are best known; and these appear to be specific for the group to which the infection pneumococcus belongs." In rapidly fatal cases, he says, the defensive reactions are inadequate to destroy the pneumococci which persist and multiply in the lung and in the blood, while free antibodies are absent from the blood. With lysis there is a gradual, with crisis a prompt destruction of the pneumococci.

The leukocyte count in pneumonia offers valuable prognostic data. High leukocyte counts during the entire first week are favorable. In mild infections in which there are moderate constitutional symptoms, favorable facies, and physical signs, the leukocyte count of 18,000 to 25,000 usually justifies a favorable prognosis. With severe constitutional symptoms early and a high leukocyte count, the outlook for a favorable course is materially strengthened. Counts about 25,000 are encouraging under such circumstances. Severe infections which include marked evidences of cardiac toxemia and a low leukocyte count offer only the gravest prognosis. Severe constitutional symptoms with fair heart strength, often delirium, with high leukocyte count (40,000 to 50,000) offer encouragement, but the prognosis should be guarded. Decrease of leukocytes with positive crisis is favorable. A rise in the number of polymorphonuclear leukocytes after crisis, with febrile movement or other symptoms, is always suggestive of some complication—empyema, phlebitis, thrombosis, abscess, or other nontuberculous process. Suspicion of a tuberculous complication is justified with fever or persistence of physical signs, failure to convalesce satisfactorily, and a low white count. A bad prognosis is justified in pneumonia cases with a low leukocyte count or leukopenia. The average mortality in cases without leukocytosis is over fifty per cent. The leukocyte count appears to bear no relation to the extent of consolidation.

A high leukocyte count during the first day or two, followed by a rapid decided fall is always grave. Mortality in cases with high leukocyte counts is not caused by pneumococcus toxemia directly, but by some complication such as myocarditis, meningitis, septic or pyemic disease, pulmonary thrombosis, or some other secondary disturbance. Complications of an inflammatory and pyogenic nature are associated with high leukocyte counts, including abscess, empyema, endocarditis, pericarditis, phlebitis, metastatic parotitis, and a variety of less frequent complications.

Study of 514 cases treated in Bellevue Hospital showed average leukocyte counts of 20,444 for the patients who recovered, and 18,827 for those who died. From this we may conclude that leukocytosis is as high in the fatal cases as in those which recover, a high leukocytosis indicating a very severe infection.

Neutrophilic leukocytosis predominates in pneumonia. Eosinophilia is not present until the beginning of the crisis, and its appearance one or two days before the crisis presages a favorable outcome (Naegeli).

The blood plates are always increased in number and Naegeli calls attention to the reduction of the fibrin content of the blood in the absence of leukocytosis. Urobilin in the blood is probably evidence of interference with the liver function and the destruction of red blood corpuscles. Connor and Roper found that in fatal cases of pneumonia the bilirubin disappeared from the blood within three days of death, and that urobilin appeared. The coagulation time of the blood is prolonged during the acute stage of pneumonia. A return of the time to normal is favorable, and is coincident with convalescence.

The Nervous System.—But few cases of pneumonia pass through the acute stages without some evidences of toxemia of the nervous system. The headache of the early stage may often be very severe, but its severity is in no way related to the gravity of the disease. Early delirium is not of serious import. Wild, active delirum, with failing pulse, is often evidence of deep infection, and may continue until shortly before death. In many such cases there is a large organized thrombus in the pulmonary artery. In alcoholics there are almost always delirium and other evidences of alcoholic meningitis, with rapid respiration, albuminuria with casts, and death with irregular breathing in coma after several days of the active manifestations mentioned.

Convulsions in children during the first or second days of pneumonia are not often serious, but are of grave import when they occur late. In the adult, convulsions during any stage are of serious import. With convulsions and the Kernig symptom, pneumococcus meningitis must be suspected, and an unfavorable prognosis given.

In meningismus, the brain, cord, and membranes are hyperemic and succulent. Here and there are small deposits of pneumococci. The spinal fluid contains an occasional polymorphonuclear leukocyte, but no pneumococci. The prognosis is comparatively good, though meningitis may finally develop and change the complexion of the case. The condition is frequent in children, and at times it causes the leading symptoms of brain fever in both children

and adults during 24 to 48 hours before pneumonia is diagnosed.

The pneumococcus is the most frequent cause of pyogenic meningitis. The diplococcus rapidly multiplies in the membranes of the brain and in the spinal fluid. The development of symptoms is prompt, the clinical picture clear, and the prognosis absolutely bad. Lumbar puncture within twelve to twenty-four hours may show no marked change, but within eighteen to thirty-six hours there is increase of fluid, increased pressure (250 to 400 mm. and over), and albumin is found. The fluid is cloudy, it may be slightly purulent, and there are many polymorphonuclear leukocytes and an abundance of pneumococci.

In the aged, cerebral symptoms, including delirium and great unrest, with muttering, is almost uniformly fatal. As a rule prognosis is good in the delirium following the crisis, either during convalescence or several weeks after recovery. The duration varies. In children, it continues from two to five days; in adults, aged between 30 and 45, from three to six weeks; in a few with bad family histories, subacute or chronic mental disturbance develops, but is usually found to yield.

The Urinary System.—In favorable cases the quantity of urine secreted continues considerably reduced, but in the most serious and malignant infections the quantity voided is but a few ounces. Albuminuria is an almost constant attendant of pneumonia, but is not always of serious significance. Nephritis adds to the dangers materially. In toxic nephritis there are abundant casts, marked reduction of the urine, large albumin loss, and the other characteristics of parenchymatous nephritis without many blood cells. Overpowering septic nephritis is more serious than the other forms of kidney involvement. In all chronic nephritis the added infection of pneumonia can produce only baneful results.

In most cases, excretion of the chlorids is reduced, but returns to normal after the acute stage. Urea and uric acid offer no prognostic data. Glycosuria may appear during any stage. In cases which were normal before infection, it is usually transitory, and does not interfere with the progress of the case. In diabetes mellitus or insipidus the prognosis is exceedingly grave. Most of these cases are atypical and present serious complications, though recovery is among the possibilities.

The Skin.—The prognostic significance of herpes labialis is debatable, but the weight of authority is in favor of a good prognosis in its presence.

Free sweating with a decided fall of temperature at the crisis is always favorable. Excessive sweating, with cyanosis and cold extremities, pinched facies, small pulse, and rapid breathing, often associated with edema of the lung, is almost always fatal.

The Gastro-Intestinal System.—Vomiting and diarrhea do not usually persist, and rarely interfere with the course of the disease. Membranous colitis is an infrequent complication, but is always serious. Meteorism which persists is of considerable importance. It interferes with respiration, throws added work on the heart, causes great discomfort by displacing the diaphragm, and frequently prevents sleep. Hiccough is also wearing, and unless controlled may increase the dangers of the infection. With alcoholics and the asthenic types of the disease it is always ominous. Acute dilatation of the stomach due to constriction of the duodenum at the root of the mesentery, with probable primary involvement of the innervation, is one of the gravest complications of pneumonia. Prompt recognition and the use of the stomach tube will remove the dangers due to this complication. Slight jaundice is not serious. Deep jaundice with marked nervous symptoms is always grave.

The Spleen.—This organ offers no data of significance in the prognosis of the disease. Hemorrhagic infarcts of the spleen, with pneumococcus endocarditis or abscess, add to dangers already grave.

Physical Signs.—The prognostic significance of the physical signs referable to the consolidation must be interpreted in connection with the associated symptoms referable to the heart and vascular system separately. They offer but insignificant evidence of existing danger save in those cases where there is respiratory insufficiency with pulmonary edema and with far-reaching consolidation and atelectasis. The dangers of pneumonia are often out of all proportion to the extent of the physical signs. With central pneumonia there may be overpowering toxemia before the disease can be localized by the objective and positive manifestations of consolidation.

Clinical Varieties of Croupous Pneumonia

Afebrile Pneumonia.—The possibility of serious infection without rise of temperature and the association of nephritis and the influence of uremic poisoning have already been considered. These cases may lead to crisis just as do the febrile types.

Bilious Pneumonia.—In grave cases there is deep jaundice, albuminuria with casts, reduced and concentrated urine, and cerebral disturbances. Usually there is infection of the bile

passages which may be of the mixed type. The mortality of such cases is about 35 per cent.

Pneumonia of the Alcoholic.—The majority of alcoholics who die with symptoms of meningitis, delirium tremens, or other acute manifestations, show on postmortem examination the presence of pulmonary consolidation.

Asthenic Pneumonia.—The subject is reduced, as a rule, by previous disease. The pulse is weak and small, the consolidation is usually limited, and there are great unrest, marked delirium, and many evidences of an atypical course. There may be no initial chill, and the sputum may never be rusty. The spleen is enlarged. Pericarditis and endocarditis are frequent complications. These cases offer an uncertain, often unfavorable, prognosis.

Migratory Pneumonia.—There are repeated fresh invasions of the lung tissue, and generally there is added streptococcic infection. The duration of these cases may be three weeks, often longer, and occasionally the patient dies after several months of mixed infection. In some there is also malignant endocarditis, which is invariably fatal.

Embolic Pneumonia.—This is often an expression of malignant endocarditis. There are wedge-shaped infarcts. The symptoms are atypical, and the prognosis is grave.

Hypostatic Pneumonia.—This form accompanies acute and chronic infections or disease in which there has been preceding hypostatic congestion. It is often an indication of an insufficient myocardium, and may be a sequel of chronic disease in old people who have been bedridden during long periods. It often ends life after fracture of the hip, after operation in the decrepit, and in chronic brain and spinal lesions.

Aspiration Pneumonia.—This type, due to the inhalation of foreign substances, following ether anesthesia, or associated with paralyses (bulbar or glossopharyngeal), diphtheria, and other acute and chronic diseases, is serious if the associated condition is grave.

Pneumonia and Tuberculosis.—These cases include: (1) Acute croupous pneumonia, in which the disease attacks an area of lung tissue, the greater part of which is the seat of infiltrating but latent tuberculosis. The prognosis is not necessarily bad. (2) Cases in which there is: (a) An acute croupous or catarrhal pneumonia in the immediate vicinity of tuberculous areas. The disease may run its course, and terminate by crisis or lysis. There is usually no hemoptysis. (b) Chronic or subacute pulmonary tuberculosis in which pneumonia attacks distant parts of the diseased or previously healthy lung, in which there is no early hemoptysis, but in which the tuberculous process is actively progressive. The prognosis of these cases is bad. (3) Cases in which there is mixed infection (pneumococcus and streptococcus) in which the acute pneumonic consolidation is added either to a latent or an active pulmonary tuberculosis. Hemoptysis is an early symptom of the acute exacerbation, or immediately precedes the pneumonia, the latter depending on the aspiration of infecting agents from the seat of the original tuberculous infiltration, which is usually disorganized. The prognosis of this type is bad. (4) Cases of acute croupous or catarrhal pneumonia with concurrent tuberculous infection. This complex is usually found in patients with lowered vitality resulting from childbearing, alcoholism, or unfavorable environment. In these patients there is in a short time disorganization of lung tissue, cheesy infiltration, coagulation necrosis, hectic fever, and death.

Complications

Pulmonary Edema.—This may develop early, when it literally drowns the patient in his own serum. When it develops after the first stage and is not promptly controlled, it is among the most serious complications of pneumonia.

Gangrene of the Lung.—Pye-Smith reports 37 cases in 7,868 pneumonias. When extensive, it is usually fatal, though perhaps not for several months. When circumscribed, recovery usually follows slowly.

Empyema.—Its early recognition and prompt and radical treatment offers an excellent prognosis in the absence of other complications. Pneumococcus empyema is more apt to recover than any other form of this complication.

Pleurisy (Serous and Fibrinous).—If detected early, pleurisy following pneumonia is usually promptly relieved. Unrecognized pleural effusion which displaces the lung and surrounding organs during long periods and in which spontaneous recovery follows, may cause permanent damage because of adhesions. When pleurisy becomes chronic, there is always danger of fibrosis of the lung, terminating in chronic interstitial pneumonia.

Bronchitis and Bronchiolitis.—In old people and very young children, inflammation of the smaller tubes is often a serious complication, but in adults it has less influence on prognosis than in other forms of the disease.

Bronchorrhea.—Chronic bronchitis with bronchorrhea may, in the presence of acute pneumonia, particularly when there is associated emphysema, interfere with the overburdened organs of respiration and throw added work on the right heart.

Lung Abscess.—All cases of superficial lung abscess, diagnosed early and treated radically, make satisfactory recoveries. Deep-seated abscess of the lung is not frequent, and is usually fatal. Multiple abscesses with mixed infection, part of an existing pyemia, are fatal. Lung abscess may lead to or be associated with gangrene, and the outcome is grave. Superficial abscesses may break into the pleural cavity, leading to pyopneumothorax, into a bronchus, the mediastinum, or the pericardium. All these accidents are serious.

Emphysema.—This is largely a compensatory hypertrophy. It is physiologic, and does not influence the progress of the primary infection.

Purulent Infiltration of the Lung.—This complication may occur during the stage of grey hepatization. It is held by some to be identical pathologically with abscess, and by many is considered uniformly fatal. We incline to the belief of Pye-Smith that it need not uniformly result in death, although the condition is serious.

Fibrosis of the Lung.—The pathologic changes are identical with chronic interstitial pneumonia. Probably deep pleural changes which become chronic are responsible for the connective-tissue overgrowth. Patients may live for years, and usually die of intercurrent disease, or tuberculosis may follow.

Pericarditis.—Postmortem statistics prove the presence of pericarditis in 10 to 12 per cent of the pneumonics examined. Purulent pericarditis complicating the early stages of pneumonia is almost uniformly fatal. Pneumonics who live beyond the acute stage with pericarditis and effusion offer encouragement for radical surgical treatment. Myocarditis or myocardial degeneration is an almost constant accompaniment of pericarditis. Acute dilatation of the ventricles with myocarditis and pericarditis is a frequent cause of sudden death.

Endocarditis.—This may be either malignant or benign. Preëxisting endocarditis always adds to the danger of pneumonia. In the malignant form, the diseased heart valves invite the deposit of pneumococci. Acute exacerbations of endocarditis result, and pneumococcus endocarditis develops which may run an acute or exceedingly chronic course, with multiple infarcts in the various organs of the body, and which in the end kills the patient. The larger part of endocardial complications, however, are benign, and hence yield to treatment. There are many associated conditions which influence the prognosis of all forms of endocarditis complicating pneumonia. Among these are the associated myocardial degeneration and vasomotor paralyses. It is wise always to give a guarded prognosis with all heart complications in pneumonia.

Otitis Media Suppurativa.—Few adults suffer from this complication, but it occurs frequently in children. When radically treated, it does not influence the prognosis of the primary infection. Neglected cases may lead to sequelæ such as meningitis, septic or pyemic conditions. cerebral thrombosis, abscess of the brain, and other distant disturbances.

Other complications which may occur are arthritis (suppurative and nonsuppurative), suppurative peritonitis, purpura, neuritis (peripheral), and metastatic parotitis.

EDITORIAL

EXAMINATION OF AUTOMOBILE DRIVERS

In the State of Connecticut an effort was made to discover the cause of automobile accidents. Five hundred and twenty-four persons who had reported accidents in 1923 were selected, and their eyes were examined. About 13 per cent were color-blind, and about 20 per cent had defective vision. These figures were published by the American Optical Company.

The Medical Society of Delaware and the Delaware Safety Council drew up a plan for examination of automobile drivers which originally included examination of the acuity of vision, depth perception (a test used in the Medical Corps attached to the Air Service Corps to determine ability to judge distance), and the examination of the color vision. The test for color vision was dropped by the Secretary of State of Delaware.

There are two types of color blindness—congenital and acquired. The acquired type is associated with optic atrophy, which is most often caused by syphilis, tuberculosis, or chronic alcoholism. An automobile driver who is color-blind may not only be unable to recognize traffic signals, but may be suffering from other constitutional conditions which would reduce his ability to drive safely. These considerations and the figures reported from Connecticut which show how widespread this condition is are indicative of the need for examination of color perception in all candidates for a driver's license.

Reducing Weight.—According to the *Indiana State Medical Journal* for June, 1927, "a prominent editor in the east is authority for the statement that a certain newspaper received hundreds of inquiries from women wishing to buy tapeworms in order to reduce their weight. Why not ask for hookworms to quiet restless babies?" We know of several women who paid an individual in New York City $5 per pill. Each pill, sent by mail, was supposed to contain the head of a tapeworm. The "host" was advised to "house" the tapeworm until the required reduction in weight was obtained, then undergo the necessary treatment to get rid of the offender.

Medical News

Deaths

ALVA MAE SMITH, daughter of Dr. Albert H. and the late Elizabeth Ann Smith, of Philadelphia; July 8.

GEORGE BOEHM, M.D., of Marienville; University of Pittsburgh School of Medicine, 1901; aged 54; July 6.

ROBERT P. R. HUYETT, M.D., of Shillington; Jefferson Medical College of Philadelphia, 1878; aged 71; May 3.

EDWARD P. WARREN, M.D., of Etters; University of Maryland School of Medicine, Baltimore, 1868; aged 79; May 18.

HELENA M. MULLHAUPT, M.D., of St. Marys; Woman's Medical College of Pennsylvania, 1880; aged 67; May 26, of pneumonia.

JOSEPH L. MCGINLEY, M.D., of Wilkes-Barre; University of Pennsylvania School of Medicine, 1912; served during the World War; aged 46; May 18, of pulmonary tuberculosis.

GEORGE J. BOYD, M.D., of Beaver Falls; University of Michigan Medical School, Ann Arbor, 1889; father of Dr. George R. Boyd; aged 66; May 28, following a year's illness.

RACHEL R. BENN DUNKLE, M.D., of Meadville; Woman's Medical College of Pennsylvania, 1890; for nearly twenty years a medical missionary in China; aged 73; May 4.

H. IRVIN WOODHEAD, M.D., of Bradford; Jefferson Medical College of Philadelphia, 1896; formerly president of the school board of Forksville and coroner of Sullivan County; aged 61; May 23, of cerebral hemorrhage.

J. PACKARD LAIRD, M.D., of Berwyn and Miami, Florida; George Washington University Medical School, Washington, D. C., 1902; aged 50; July 7, of heart disease, aboard the steamship *Cameronia*, bound for Glasgow, Scotland.

ALBON E. FICHTNER, M.D., of Johnstown; University of Pittsburgh School of Medicine, 1907; served in France during the World War; medical director of a maternity hospital bearing his name; aged 43; June 21, of an accidental overdose of chloroform, self-administered.

JOSEPH M. SPELLISSY, M.D., of Philadelphia; University of Pennsylvania School of Medicine, 1890; specialized in orthopedic work; member of the staffs of the Pennsylvania and St. Joseph's Hospitals, and the staff and board of St. Edmond's Home for Crippled Children; July 27, after a prolonged illness.

CHARLES F. CHANDLER, M.D., of Philadelphia; Medico-Chirurgical College of Philadelphia, 1891; gave up his practice five years ago to study law, and since then had been associated with Wilson & McAdams, attorneys, as medical adviser; formerly connected with Lankenau Hospital; aged 57; July 12, of heart disease.

GEORGE W. STEWART, JR., M.D., of Philadelphia; Hahnemann Medical College and Hospital of Philadelphia, 1883; later studied at the University of Vienna in Austria and Heidelberg University in Germany; during the last Balkan War was in charge of the field hospital service of the Serbian Army; founder of St. Luke's Hospital, Philadelphia, and served as a staff surgeon in that institution; author of a number of plays and poems as well as several books; aged 70; July 13, following a long illness.

Births

TO DR. AND MRS. PAUL C. SHOEMAKER, of Allentown, a daughter, July 4.

TO DR. AND MRS. A. EDWARD COLCHER, of Philadelphia, a son, Robert Ely Colcher, July 9.

Engagements

MISS DOROTHY DODGE, of Glenside, and Dr. Thomas J. Cush, of Johnstown.

MRS. S. CRAIG KELLER and Dr. D. A. Roman, both of Philadelphia.

MISS SARA ELIZABETH FRITCH, of Macungie, and Dr. Ralph H. Henry, of Allentown.

Marriages

DR. JOHN JOSEPH MALINOWSKI, of Wilkes-Barre, and Miss Hettie Marie Drapiewski, of Nanticoke, February 19.

MISS BERTHA LOUISE ASHWORTH, daughter of Mrs. Thomas W. Ashworth, of Danville, Va., and Burlington, N. C., to Dr. Harry A. Fisher, Jr., of Philadelphia, July 21.

DR. ADRIAN W. VOEGELIN, of Philadelphia, and Miss Verna Rhine, R.N., former librarian at the Kensington Hospital, Philadelphia, June 27.

DR. WILLIAM GORDON and Dr. Lillian Goldstein, both of Philadelphia, June 28. Dr. and Mrs. Gordon interned at Mount Sinai Hospital two years ago.

Miscellaneous

DR. AND MRS. JOSEPH LEIDY, of Philadelphia, sailed on the *Aquitania*, July 25, for London.

DR. FRED H. ALBEE has been made president-elect of the American Orthopedic Association.

DR. FRANK F. D. RECKORD and his sister, Miss Mary Reckord, of Harrisburg, are traveling in Europe.

DR. AND MRS. ALEXIS DUPONT SMITH, of Philadelphia, sailed on July 30 for a short visit to England.

DR. RAYMOND D. TICE, of Quakertown, has been appointed to the surgical staff of the Allentown Hospital.

DR. AND MRS. J. NORMAN HENRY and family, of Philadelphia, recently sailed on the *Leviathan* for a European trip.

DR. AND MRS. R. POWERS WILKINSON, of Philadelphia, sailed on July 16 on the *Caronia* for an extended trip abroad.

DR. AND MRS. JAMES A. KELLY and daughter, Miss Dorothy Kelly, of Philadelphia, sailed July 30 for a six-weeks' trip abroad.

DR. P. BROOKE BLAND and his daughter, Miss Helen B. Bland, of Bala, have gone to Europe where they will remain until September.

FRIENDS OF THE LATE JULES E. MASTBAUM have raised $20,000 to endow a ward in Rush Hospital, Philadelphia, to be known as the "Jules E. Mastbaum Ward for Women."

MISS MARY LEHMAN, daughter of Dr. and Mrs. Frank Lehman, of Bristol, has been awarded the Hubley R. Owen medal for surgery at the Woman's Medical College, Philadelphia.

MISS MARIAN PRIESTLEY TOULMIN, daughter of Dr. and Mrs. Harry Toulmin, of Haverford, recently sailed for Scotland, where she will spend the remainder of the summer traveling.

DR. SAMUEL J. GITTELSON has been elected president of the medical board of Mount Sinai Hospital, Philadelphia, and Dr. Henry B. Shmookler has been appointed medical director.

DR. EDWARD H. RYNEARSON, of Pittsburgh, was awarded first prize in the case-report contest of the

Allegheny County Medical Society. His subject was "Peritonitis and Acute Toxic Neuritis."

The Board of Scientific Directors of the Rockefeller Institute for Medical Research announces the appointment of Dr. Robert T. Hance as professor of zoölogy at the University of Pittsburgh.

The American Hospital for Diseases of the Stomach, Philadelphia, said to be the first in the country established exclusively for the study of diseases of the digestive tract, launched a drive, May 19, for $250,000 for new buildings and equipment.

Announcement has been made of the retirement, July 1, of Mr. Hector P. MacLagan, vice-president, treasurer, and superintendent of production of the McIntosh Electrical Corporation, Chicago, Ill. He will remain a director of the corporation.

In June, C. Zabel Robinson, president of the U. S. College of Veterinary Surgeons, Washington, D. C., in awarding diplomas to four graduates, announced that the college which has been in existence 35 years was declared discontinued.

The late Dr. Edward E. Montgomery, professor of gynecology, Jefferson Medical College, provided in his will, among other things, that on the death of his wife, $5,000 should be paid to the aid association of the Philadelphia County Medical Society.

Dr. Edgar M. Green, of Easton, has been appointed a member of the Board of Medical Education and Licensure to fill the vacancy caused by the resignation of Dr. Walter Estell Lee, of Philadelphia. Dr. Irvin D. Metzger has been reappointed a member of the Board.

The American Board of Otolaryngology will conduct its next examination in Detroit, Michigan, on September 12, 1927. The applications for examination should be sent to Dr. H. W. Loeb, Secretary, 1402 South Grand Boulevard, St. Louis, Missouri.

The St. Joseph's Hospital, Philadelphia, has opened a new maternity department with accommodations for forty patients. St. Joseph's new policy will be to give allocation privileges to outside physicians as well as to those on the staff. In the past it has been a "closed" hospital.

Dr. Samuel J. Ottinger, of Philadelphia, while changing a tire of his car, near his home recently, was knocked down by an automobile which had been struck by a trolley car. He was treated at the Children's Homeopathic Hospital for a fracture of the collar bone and cuts and bruises on the legs.

Dr. Israel Davidsohn, of Philadelphia, a University of Vienna graduate, has been appointed director of laboratories at Mount Sinai Hospital, Philadelphia. At the same time the position has been made a full-time one, which means that Dr. Davidsohn will devote his time exclusively to the hospital.

The National Committee for Mental Hygiene has awarded a fellowship for training in extramural psychiatry at the Institute for Child Guidance, New York City, to Dr. Jean M. Archibold, who at present holds the position of assistant physician at the Pennsylvania Hospital for Mental and Nervous Diseases, Philadelphia.

Washington Hospital, Washington, was bequeathed $200,000 in the will of the late Miss Margaretta Parkinson for the erection, maintenance, and equipment of an annex for the treatment of eye diseases. The donor had been blind for many years. The annex to the hospital will be designated, in memory of her father and mother, "The Office of Dr. Joseph Parkinson."

The Inter-state Postgraduate Assembly of North America will hold its annual meeting at Kansas City, Mo., October 17-20, 1927. A fine program has been prepared which will be presented by physicians from all parts of Europe and this country who have acquired recognition and fame in their particular specialties. Pre-assembly clinics will be held on October 14 and 15.

Three hundred child patients of the Northeastern General Hospital, Philadelphia, were the guests of Register of Wills Campbell at an all-day outing at Betzner Farm, July 13. Busses and automobiles chartered by business men carried the children to the grounds, where sports, contests, a watermelon party, and a lunch were features. Two clinic nurses chaperoned the children.

The American Electrotherapeutic Association will hold its thirty-seventh annual session, September 12-16, 1927, at the Hotel Pennsylvania, New York City. The program of this meeting will cover the entire field of physical therapy. All members of the profession are invited to attend and programs can be obtained by addressing the Secretary, Dr. Richard Kovacs, 223 East Sixty-eighth St., New York City.

New Donations totaling nearly $400,000 have recently been made to aid in transforming the Medical School of the University of Pennsylvania into one of the world's greatest medical centers, and to further medical research at the University. From the estate of the late Dr. Hill S. Warwick will come a sum estimated as well above $100,000. Another gift was received from Charles H. Ludington, of Philadelphia, of $25,000.

Crippled from the ravages of yellow fever, when he served as a living laboratory in 1900 for Dr. Walter Reed, who was seeking to trace the origin of the disease, John R. Kissinger, former army private, has been deeded a home in Harrington, Ind., which will relieve him from the poverty in which his voluntary illness has left him. The reward was arranged through a committee appointed by the American Association for Medical Progress.

On June 13, Dr. Charles S. Aitken, of Philadelphia, was shot in the leg by a shell-shocked veteran, George T. Schaffer, of Atlantic City, N. J. Schaffer, who had an excellent record as a soldier, also attacked Dr. Daniel M. Hoyt, who is now in Europe. The shooting occurred in the United States Veterans Bureau where Schaffer was undergoing treatment. Dr. Aitken refused to prosecute the man, but urged that he be sent to a hospital instead of to jail.

Dr. Joseph Edeiken has been reappointed chief resident physician at Mount Sinai Hospital, Philadelphia, for the ensuing year. He had served one year in that capacity. Dr. Charles Charney was appointed assistant chief resident physician, a recently created position. Each year an intern who shows the best ability is appointed chief resident and then promoted the following year to the rank of chief resident physician. On completion of this term a fellowship for one year of special study in Europe will be provided by the Board of Trustees.

The late Dr. John G. Clark, gynecologist at the University of Pennsylvania School of Medicine, provided in his will for a bequest of $50,000 to the gynecologic department of the University, and provided for the endowment of the department of gynecology at the University Hospital. Dr. Clark further provided $5,000 for the medical school of the University to be known as the "Undergraduate Medical School Fund," $100 of the income to be devoted as an honorarium for an annual lecturer to address the undergraduate society and to be known as the "John G. Clark Lectureship."

Failure of Philadelphia to meet its charity needs was revealed in the annual report of the Welfare Federation recently issued. Figures show the city fell short $325,256.76 of completing the budget of $3,443,-

546.90 asked for last October by the Federation. The deficit was incurred principally by the hospitals, where the service cannot be curtailed to the extent it can be in relief agencies. There is no way of estimating the amount of hardship endured last year because of insufficient funds.

THE UNIVERSITY OF PENNSYLVANIA School of Medicine, Philadelphia, has announced the appointment of Dr. Isidore S. Ravdin as the J. William White assistant professor of surgical research. The following advancements are announced in the Graduate School of Medicine: Associate professors—Dr. W. G. Knarr, biochemistry; Drs. T. M. McMillan and W. D. Stroud, cardiology; Dr. W. N. Winkelman, pathology; Assistant professors—Dr. B. R. Beltran, surgery; Dr. W. N. Bradley, pediatrics; Dr. H. N. Diamond, otology; Dr. J. K. Jaffee, gynecology; Dr. J. F. Sinclair, pediatrics; Dr. H. B. Wilmer, clinical allergy.

THE FOLLOWING MEMBERS OF OUR SOCIETY read papers at the annual session of the West Virginia State Medical Association, held at White Sulphur Springs, W. Va., June 21-23, 1927: Dr. Gabriel Tucker, Philadelphia, "Bronchoscopic and Esophagoscopic Cases of General Interest"; Dr. Joseph Sailer, Philadelphia, "Carcinoma of the Stomach"; Dr. Luther C. Peter, Philadelphia, "Observations on the Early Recognition and General Management of Glaucoma"; Dr. Edward B. Heckel, Pittsburgh, "The Cornea"; Dr. Elmer H. Funk, Philadelphia, "The Diagnosis and Treatment of Coronary Thrombosis"; and Dr. C. C. Mechling, Pittsburgh, "The Interpretation of the Anorectal Complaint."

DR. MARY W. GRISCOM, of Philadelphia, has returned from a trip to India, where she visited many of the medical practitioners and foreign medical centers. She found that many large and flourishing hospitals in India are under the direction of native women physicians and staffed by native physicians and nurses. Hundreds of Indian women are studying at the five foreign medical schools. Dr. Griscom visited Dr. Anna M. Fullerton, formerly of Philadelphia and long identified with the Woman's Medical College of Pennsylvania and its hospital. Dr. Fullerton founded the Medical College for Women in India. She is now retired and makes her home on the southern slopes of the Himalayas.

THROUGH THE RETIREMENT of Dr. Barton Cooke Hirst, for thirty-eight years professor of obstetrics, and the recent death of Dr. John G. Clark, who was professor of gynecology for twenty-seven years, both of these chairs at the University of Pennsylvania became vacant this spring. The Trustees decided to combine the two departments into one department of obstetrics and gynecology. Dr. Charles C. Norris has been elected professor of obstetrics and gynecology, in which position he will exercise supervision in matters of general policy and correlation of teaching. Dr. Edmund B. Piper has been elected professor of obstetrics, and Dr. Floyd E. Keene has been elected William Goodell professor of gynecology.

THE FIREMEN OF PHILADELPHIA have donated $2,000 to the building fund of Jefferson Medical College in honor of Dr. John Chalmers Da Costa, professor of surgery, Jefferson Medical College, who for about thirty-five years gratuitously served as surgeon of the Fire Bureau, surgeon of the Firemen's Pension Fund, and in other capacities. A similar amount was contributed from the sheriff's office in honor of Dr. Da Costa, and both funds will be used jointly to establish a memorial to him. It appears that Dr. Da Costa's devotion to the fire bureau is a family trait, as his grandfather, his father, and his uncle were members of hose companies in Philadelphia. For about thirty-five years, Dr. Da Costa never failed to attend a fire of any importance in Philadelphia.

THE GORGAS MEMORIAL urges lay and professional friends to contribute to the Gorgas Endowment Fund. The object of the Memorial is to: (1) Eliminate unnecessary illness. (2) Prolong life, make it healthier, more productive, and enjoyable. (3) Check many diseases before they reach the incurable stage. (4) Build up the 25,000,000 youths and adults in the United States now physically below par. (5) Lay the foundation for healthier future generations. (6) Have every individual submit to a periodic health examination by his family physician, who should be the custodian of health. (7) Prevent disease, and thereby (a) relieve the nation of $1,500,000 of its annual sick bill. (b) Prevent the present annual loss of 350,000,000 hours of time caused by preventable illness of 42,000,000 employees. (c) Save the $3,000,000,000 lost annually through reduced earning power. (d) Save 750,000 lives annually. (8) Eradicate tropical diseases, open up territories of unlimited wealth, and add enormously to the world's assets. (9) Eradicate pestiferous and disease-bearing mosquitoes (malaria alone exacts an annual toll of $100,000,000). (10) Bring about a liaison between the public and the scientific medical and dental profession—the real health authorities. (11) Free all the world from preventable disease, to which purpose the life of Gorgas was consecrated. Send checks to George M. Reynolds, Treasurer, 400 N. Michigan Avenue, Chicago.

BOOK REVIEWS

From a reviewer we expect information and advice which will guide us safely and to our profit, warning us of the poor, the mediocre, the commonplace, and inviting our attention to merit.

PRINCIPLES OF CHEMISTRY. An Introductory Textbook of Inorganic, Organic, and Physiological Chemistry for Nurses and Students of Home Economics and Applied Chemistry, with Laboratory Experiments. By Joseph H. Roe, Ph.D., Professor of Chemistry, George Washington University Medical School; Lecturer in Chemistry, Central School of Nursing, Washington, D. C.; Captain Sanitary Division, U. S. Medical Reserve. Illustrated. St. Louis, The C. V. Mosby Co., 1927.

This is a comprehensive manual primarily intended for nurses, but will be found useful in teaching students whose requirements of chemistry are elementary. The subject matter is presented in a very simple and direct manner, the more complicated phases of chemistry being omitted altogether or mentioned with commendable brevity. A large number of illustrations and interleaved blank pages for additional notes add greatly to the convenience of the students. The book may be highly recommended.

GYNECOLOGICAL DIAGNOSIS AND PATHOLOGY. By A. H. F. Barbour, M.D., LL.D., F.R.C.P., and B. P. Watson, M.D., F.R.C.S., F.A.C.S. Third edition reprinted. 201 figures and 8 colored plates. New York: William Wood & Company. Price, $4 net.

This is an excellent text for the first year student of gynecology. Its merit lies in its emphasis on pathology as the basis of diagnosis. There are good illustrations for teaching diagnosis, and the text is in terse, simple English. The subject matter is presented in a logical manner, and covers the ground with few exceptions. Esthiomene is now so commonly recognized in this country that a textbook of this kind should not omit it.

Again, it is well adapted to the student's use because it omits any suggestion of treatment. The fifty-six ways of hooking up the round ligaments may well be left for the senior to dig from a volume too large for anything but a reference work.

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THE DIAGNOSIS OF LATERAL-SINUS INFECTION*

GEORGE L. TOBEY, JR., M.D.
BOSTON, MASS.

The diagnosis of lateral-sinus infection or thrombosis is difficult, owing to the constantly changing picture. It must depend on a careful study of the whole symptom complex: (1) Primary jugular-bulb infection. (2) Septic thrombosis of the small tributaries of the lateral sinus and bulb as a result of osteomyelitis, with extension of the infection to the sinus. (3) Phlebitis due to direct infection from a perisinuous abscess, the latter often causing a slowing up of the blood stream by direct pressure, thus encouraging thrombotic formation. (4) Partial or complete thrombosis as a result of the above factors.

Primary jugular-bulb infection does occur, more often perhaps in children than in the adult. The middle-ear infection may be so slight as to cause little or no comment. During the course of an otitis media, with or without rupture of the membrana, if there is a sudden or gradual onset of symptoms of evident sepsis accompanied by unilateral headache of varying severity, infection of the bulb must be considered. Careful differential diagnosis is essential, taking into consideration the possibility of an acute otitis of the opposite ear, pyelitis (a very frequent occurrence in children), central pneumonia (often so obscure as to be discovered only on x-ray examination), meningeal involvement (usually rapid and progressive), etc. The manometric test, if positive, is conclusive; if negative, and other positive indications for exploration are absent, it may be repeated. We have demonstrated a complete obstruction occurring during an interval of twenty-four hours.

We have encountered a primary thrombosis of the bulb in an adult of 32 years. Eight days after a transitory earache there was a severe chill with sudden rise of temperature to 105°, the interval symptoms being general malaise and an indefinite unilateral fullness hardly described as headache. The initial chill was followed by two of equal severity during the next thirty-six hours, with a leukocytosis of 19,000. A very careful physical examination revealed no focus. Septic symptoms persisting, the lateral sinus and bulb were exposed through an apparently normal mastoid, and complete thrombosis of the bulb was demonstrated.

A child, during the course of an acute suppurative otitis media and mastoiditis, developed a relatively mild suppurative otitis of the opposite ear. Six days later, symptoms of sinus infection appeared. The manometer test indicated definite obstruction on the side of the recent involvement, where there was no evident mastoid complication. Exploratory operation on this side demonstrated complete thrombosis of the bulb and a patent sigmoid sinus.

Phlebitis and thrombosis of the small contributory or emissary veins undoubtedly occurs in all cases of mastoiditis, especially so in the presence of a staphylococcus infection. Should this process proceed, with septic invasion and breaking down of the thrombi, the patient demonstrates increasing symptoms of sepsis. There is general malaise, a sensation of dullness or unilateral headache, a persistent irregularity of temperature, at first rising no more than one or two degrees, loss of appetite, and a general sense of marked lassitude. Definite rigors are unusual. Close questioning will at times elicit a description of chilly sensations. Leukocytosis is seldom above 12,000 to 15,000. Blood cultures are usually negative during the first few days. An increasing pitting infiltration posterior to the mastoid is almost constant. There is a noticeable disinclination to the formation of healthy granulations in the operative field. As the process proceeds, there is a direct bacterial invasion of the lateral sinus, with more active signs of sepsis and more abrupt excursions of temperature, often accompanied by distinct rigors. There is also an increase of leukocytosis (a leukocytosis of over 20,000 being unusual) and positive bacteriemia. Since at this stage there is no definite interference with the main blood stream, the manometric test is negative.

*Read before the Section on Eye, Ear, Nose and Throat Diseases of the Medical Society of the State of Pennsylvania, Philadelphia Session, October 14, 1926.

In the past we have all encountered this symptom complex, and having ligated the jugular vein, have been disappointed that we were unable to demonstrate a definite thrombosis, yet the septic symptoms have immediately subsided with complete uncomplicated recovery—uncomplicated, if we have not procrastinated too long. Metastatic infection is very prone to appear in this type of case, the staphylococcus being the usual predominant organism. We must recognize the fact that an acute osteomyelitis of the temporal bone, especially in children and young adults, may present a clinical picture characteristic of sinus infection. Since direct infection of the sinus may occur from the small emissary veins of the diploë, in the presence of an aural infection with increasing septic symptoms, otherwise unaccounted for, a presumptive diagnosis of sinus infection is justifiable, and, even in the absence of definite signs, ligation of the jugular and opening of the lateral sinus should be done. By definite signs we mean a positive bacteriemia, positive manometric test, and demonstration of actual thrombosis of the lateral sinus.

Where the predominating organism is a pneumococcus or a streptococcus, the same relative symptoms and findings may be present, but are more explosive in type. The patient shows evidence of severe sepsis earlier, there are higher and more frequent excursions of temperature, definite chills may be present, and a positive bacteriemia is frequent.

Thrombosis of the lateral sinus or jugular bulb may be due to direct infection through the sinus wall or secondary to an interference of or slowing up of the blood stream by direct pressure, as from granulations, a perisinuous abscess, or a cholesteatomatous mass.

During the early stages of formation of a mural thrombus or even of complete thrombosis, there may be no evident symptoms of sinus involvement. There may be a dull unilateral headache or a sense of pressure, at times throbbing in character and unrelieved by medicaments, general malaise, loss of appetite, a tendency to apathy, and irregular temperature. In other words, the patient seems more ill than can actually be accounted for by associated or previous mastoid symptoms. The granulations in the mastoid wound are indolent or even refuse to grow. There may be an apparent increase in the caliber of the external jugular on the opposite side and an increasing induration or fullness of the soft tissues posterior to and below the mastoid. In about 10 per cent of observed cases there is a suspicion of choked disk. During the later formation of the mural thrombus, bacteria may be released, causing more evident symptoms of sepsis, and a bacteriemia may be demonstrable at times. Careful differential diagnostic study is essential. Manometric tests during the later stage of mural thrombosis will often show a partial obstruction to venous circulation on the suspected side. Complete thrombosis will often cause no further symptoms for an appreciable time, often ten days or two weeks, when evident and active symptoms of acute sepsis supervene, due to septic invasion and breaking down of the thrombus.

Exposure of the sigmoid sinus may reveal a definite perisinuous abscess with no apparent involvement of the sinus wall. Granulation may be present on the sinus, and may extend from beyond the knee to the jugular bulb. In the absence of a fistula through the wall we have found it impossible to make a definite statement as to any pathologic change which may have taken place within the sinus itself.

The needle puncture is unreliable and not without danger. The manometric test, as devised by Dr. James Ayer, has been demonstrated to be of the greatest value to us as otologists, and is of undoubted value in demonstrating partial or complete obstruction of the circulation through the lateral sinus and jugular bulb. The test is based upon the fact that increased intracranial pressure is normally propagated throughout the cerebrospinal-fluid system and may be measured by a manometer employed in connection with lumbar puncture. Compression of the internal jugular veins causes increased intracranial pressure, with immediate rise in spinal-fluid pressure.

It is now generally considered that absence of a rise in fluid pressure on jugular compression (positive Queckenstedt) indicates spinal subarachnoid block, a most important and early sign in spinal-cord tumor. More recently it has been shown that block may also occur and be detected in a similar manner in the presence of tumor of the cerebellar fossa. In both of these conditions, the evidence on which diagnosis of block rests is absence of rise in pressure below the level of obstruction, the increased intracranial pressure being assumed in single pressure below, or proved by two punctures, one above and one below the level of obstruction. It may be safely said that the criteria on which these tests depend and the results of the tests have been for the most part trustworthy. So much so, in fact, that the effect of jugular compression on spinal-fluid pressure forms one of the routine tests in diagnostic lumbar puncture.

While the criterion on which a diagnosis of sinus thrombosis is based is the same as that of subarachnoid block; namely, absence of rise in

pressure in the spinal-fluid manometer, it will be seen that the mechanism by which this is shown is quite different. Instead of an increased head of fluid which cannot be transmitted because of obstruction, there is here no elevation of pressure at its source, because of venous obliteration. Also, we are here concerned with a careful comparison of the effect of pressure on each vein separately, not merely with the effect of simultaneous compression of both internal jugular veins, as in the diagnosis of cord tumor.

The technic is as follows: With the patient in the lateral position, lumbar puncture is performed, and the fluid is allowed to run into a glass manometer of 2 mm. bore. The initial pressure reading is noted; also the presence of pulse and respiratory oscillations as evidence of patency of the manometric system. Now, without in any way disturbing the patient, an assistant gently presses on one side of the neck between the larynx and the sternocleidomastoid muscle until he feels a strong carotid-arterial pulsation. During the compression, the operator watches the rapidity of rise of the fluid column in the manometer, the promptness of its beginning, and the full height to which it attains, and, on release of the jugular compression, the rapidity of drop in pressure. The procedure is now repeated on the opposite side of the neck, and then for comparison, both sides of the neck are pressed simultaneously.

In a typical case of lateral-sinus thrombosis there is a prompt and rapid rise in fluid pressure to twice or three times the initial reading when the internal jugular vein draining the normal sinus is compressed. This pressure rise is maximal, being equivalent to the pressure attained when both jugular veins are compressed. Pressure over the vein draining the thrombosed lateral sinus causes either no rise or more commonly a slow rise of only 10 to 20 mm. in the manometer.

These findings are characteristic of complete obliteration of the sinus. Partial obstruction from mural thrombosis naturally gives less striking results, yet results of value when correlated with clinical findings.

We may consider some of the pitfalls of the technic as encountered in the study of a large number of cases:

1. Incomplete compression of the jugular vein as the result of faulty technic in applying compression accurately, as a result of obesity, tumors, cervical adenitis, or phlegm.

2. Absence of rise in fluid pressure or very slight rise is occasionally noted in patients with no obstruction either in the venous or in the subarachnoid fluid systems, when the cerebrospinal fluid is under low tension. This can easily be proved in a given case by injecting from 10 to 20 c.c. of physiologic sodium-chlorid solution, whereupon dynamic tests will appear normal.

3. An abnormal rise in fluid pressure may result from carelessness in performing the test, or from extraneous acts on the part of the patient. If the patient coughs, holds his breath, grunts, or even moves his head or body, a prompt rise in pressure will be noted under normal or abnormal conditions, thus vitiating any record.

4. Normal difference on the two sides. The foregoing pitfalls concern bilateral as well as unilateral venous compression. A group of unselected patients in the neurologic clinic were examined with a view to determining the uniformity in response to jugular compression on the two sides. The following conclusions are justified from this study: (a) There is often a marked difference in the height of the pressure reading following compression of each internal jugular vein separately. However, a difference of over 50 mm. is unusual and over 100 mm. exceptional. (b) Given a normal initial spinal-fluid pressure (150 mm.), the rise on jugular compression of one side usually will be ample, seldom less than 50 mm., more likely over 100 mm. (c) The rise in fluid pressure appears to be somewhat less when the vein on the dependent side is compressed. It is likely that this is an error in technic due to difficulty in reaching this vein rather than an inherent difference in physiology.

5. Anatomic variation in the size of the lateral sinuses must be admitted, although a demonstrable difference in the size of the two lateral sinuses is unusual. This difference is occasionally observed, and in our experience with this test one example of such a discrepancy occurred. We must, therefore, admit a certain irregularity in the anatomic disposition of the tributaries of the internal jugular vein, variations of the facial vein being of greatest significance in this test. It is probable that the slight rise frequently observed on compression of the jugular vein on the side of complete sinus thrombosis is to be explained by coincident compression causing stasis in the ophthalmic venous system.

The possibility of two known dangers must be admitted in the use of this test. We refer to (1) sudden death from the presence of subtentorial abscess or tumor following lumbar puncture, and (2) the precipitation of acute meningitis.

The first danger may almost be eliminated by a careful examination of the patient. If the neurologic examination suggests the presence of

abscess or tumor, but especially if choked disks are found, the well-known danger of medullary paralysis following lumbar puncture must be entertained. In such patients the spinal-fluid tests should not be attempted.

The second possible danger relates to the liberation of organisms from an area of localized infection or from the blood stream. The former appears to us to be unlikely unless large amounts of fluid are withdrawn. But the latter danger rests on experimental evidence in which it was shown that in the presence of blood infection passage of organisms from vessels to meninges may be facilitated by withdrawal of cerebrospinal fluid, or by cerebral venous congestion. Although recognizing this is a biologic principle, we have so far failed to note this serious coincidence clinically. Further, we believe that this danger is not great, because we seldom have present in man the setting required for the experimental production of meningitis; namely, septicemia with a sufficient number of organisms of proper virulence; nor do we reduce fluid pressure so greatly or congest cerebral vessels so long as in the experiments in which meningitis was precipitated from septicemia.

We feel justified, after careful analysis of these cases, in stating that often a diagnosis of complete lateral-sinus thrombosis, positive or negative, may be made, and that confirmatory data of mural thrombosis are often demonstrable. The test has proved of special value in cases presenting double mastoiditis in which symptoms of lateral-sinus thrombosis developed.

Dermatology in Relation to Internal Medicine*

DERMATOLOGIC LEADS TO INTERNAL MEDICAL DIAGNOSIS

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It has been my lot to practice internal medicine with particular attention to dermatology for twenty years before limiting my practice exclusively to dermatology and syphilology. During these twenty years a knowledge of dermatology has often aided in the diagnosis and management of internal medical conditions. Dermatology is essentially a highly specialized branch of internal medicine. Many diseases of the skin are cutaneous expressions of a more serious underlying constitutional reaction. Although the management of scabies need not require internal medication, we realize more and more the necessity of the general treatment of patients who present dermatologic pathology. Consideration of a cutaneous lesion, even one so trivial as an hypertrichosis, purely from a cosmetic standpoint is gross carelessness, and labels the dermatologist as a "beauty specialist" rather than a physician. Correct interpretation of such a lesion may lead to some asymptomatic, however grave, underlying condition.

There are a few cutaneous lesions which in themselves are definite leads to internal medical problems. On the other hand, there are many skin conditions which suggest some underlying constitutional derangement. The more commonly encountered medical derangements which often first suggest themselves by cutaneous expressions include such conditions as gastro-intestinal dysfunction, nutritional disturbances, focal infection, hyperglycemia, nervous diseases, circulatory disturbances, diseases of the hematopoietic system, tuberculosis, malignancy, and syphilis.

THE SKIN IN DIABETES

The routine examination of urine should be carried out in the examination of all dermatologic patients. The failure, however, to obtain a positive Fehling's reduction test does not necessarily rule out a potential diabetes or a hyperglycemia. Many dermatologic conditions are encountered which in themselves cause suspicion of an underlying low sugar tolerance. The prerequisite of a good syphilographer is a high index of suspicion for syphilis. Just so our dermatologic index of suspicion should often lead us to valuable underlying information. Gangrene of the lower extremities is recognized by all as a likely complication to diabetes. Other conditions, such as general pruritus, carbuncles, furuncles, folliculitis, and xanthoma, are definitely associated with diabetic tendencies. Eczematous conditions likewise are frequently encountered in diabetic patients. The pruritus is as a rule more pronounced in the flexors, especially the genital, anal, and inguinal regions. The attacks of furuncles and carbuncles are especially troublesome, and a history of recurrences for years is frequent. Follicular pustules of long duration, more particularly over the arms and legs, should at once arouse suspicion of possible diabetes. Xanthoma diabeticorum in a majority of all reported cases has occurred in glycosuric individuals. A bronzing of the skin is also a readily appreciated symptom of diabetes.

Highman, Schwartz, and Mahnken in 1916 reported a series of blood-sugar findings in the more common dermatoses. In eight-nine cases the sugar content was normal, while there was

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an increase in sixty cases, the majority of which were acne, seborrhea, and sycosis. These findings, as well as our own observations, should lead us to conclude that many infectious conditions of pilosebaceous character should suggest a possible underlying glycosuria, hyperglycemia, or at least a low carbohydrate tolerance. In my dermatologic practice, I have often discovered an early diabetes, and thus afforded the individual a better chance for cure, in patients who presented themselves only because of a chronic pruritus or a history of repeated furuncles.

Dermatology and the Nervous System

Clinical material of interest to dermatologist and neurologist are pigmentary changes, disturbance of sweating, abnormalities in quantity and distribution of body hair, trophic phenomena, skin eruptions and inflammations, and a variety of tumors. Pigmentary changes may be lack of pigmentation, generalized or circumscribed with or without thickening (neurodermite), vitiligo, leukoderma, and scleroderma. In syringomyelia and in chronic peripheral neuritis, the skin of the affected nerve area may be without pigment, quite smooth, and glossy. In certain cases of spinal-cord tumor there is a pigmentation of one or two segmental areas corresponding to the site of the tumor. In subacute combined degeneration of the spinal cord it is common to find that the skin of the lower extremities appears smooth, glossy, and with a yellow tint.

Erythromelalgia and Raynaud's disease are definitely suggestive of neurotrophic disturbances causing a vasomotor reaction. The flushing of migraine is helpful in diagnosis. Hyperhidrosis is caused by an underlying nerve mechanism. Localized absence of sweating is indicative of destructive lesions in nerve trunks, and is part of the syndrome of injury to the cervical sympathetics. Wile has suggested that the occurrence of patchy alopecia in secondary syphilis is suggestive of cerebrospinal invasion.

Chronic neuralgia and neuritis will cause loss of hair in peripheral nerve areas. Puffing of the hands, pain in the arms, together with vasomotor disturbance is suggestive of cervical rib. Trophic sores and ulcers are very suggestive of disease of the spinal cord, as well as severe lesions of peripheral nerves; for example, the trophic ulcer of tabes and the so-called diabetes neuritis. Multiple sclerosis of only the spinal cord may be differentiated from multiple neuritis by its trophic changes. A painless gangrene of one or more fingers should suggest a syringomyelia. Examination of the skin for metastatic lesions of neurofibroma or melanoma should be done before a brain-tumor operation as an aid in differential diagnosis. Herpes zoster is an excellent example of a spinal nerve-root lesion. In questionable tuberculous meningitis, especially in youth, cutaneous examination for other evidence of tuberculosis should be made as an aid to diagnosis. The dementia of pellagra can readily be explained by its associated dermatologic expression, as well as a persistent diarrhea. I recently examined a girl carefully for parasites which she insisted were crawling on her body. Examination revealed a perfectly normal skin, and her condition was essentially neurologic.

The Skin and the Endocrine System

The occurrence of adolescent changes in the skin at puberty and at the menopause are definitely suggestive of the influence of the endocrine system upon the skin. Seborrhea, comedones, and acne are most prevalent during early adolescence, but are in reality only an expression of the increased physiologic activity of the pilosebaceous system. Observations differ on the association of acne and menstrual disorders in young women. My impressions have been that in many of these cases the skin manifestation and menstrual dysfunction are very often the result of a secondary factor. Faulty diet with excess carbohydrate intake, constipation, and undernourishment, together with faulty occupation are to be seriously considered in these cases. It is very common to see a flare-up in acne, seborrhea, or eczematous conditions at the time of menstruation. Occasionally such conditions as erythema, recurrent herpes, and urticaria appear to be closely related to some menstrual dysfunction. Only recently I was confronted by a case of severe recurrent angioneurotic edema occurring at the menopause. Mixed glandular therapy in this case effected complete relief of all the menopausal symptoms, as well as of the cutaneous outbreaks. The occurrence of pigmentary deposits, especially of the face, is a very suggestive sign of pregnancy. Many of the more common dermatoses appear to be aggravated, and often recur only during pregnancy. In my opinion this phenomenon is probably as much a toxic symptom as one of endocrine origin.

Certain conditions of the skin are very suggestive of thyroid disturbance. Such evidence as thickening and roughness of the skin, loss of hair, seborrheic tendencies, as well as alopecia areata, icthyosis, and scleroderma are often seen in hypothyroidism. Likewise hyperhidrosis, hypertrichosis, and vasomotor changes are often encountered in overactivity of the thyroid. The disturbed function of the adrenals is well shown by the pigmentary changes in Addison's dis-

ease. Guy and Hollander have recently reported a series of congenital urticaria pigmentosa in children, all of whom showed an enlarged thymus. The effect of parathyroid in chronic leg ulcers suggests a possible relation between a skin lesion and the parathyroid glands. Foerster and others have demonstrated favorable results in the treatment of psoriasis by fractional doses of x-ray administered to the thymus. Of late, our attention has been called to the possibility of endocrine disturbance as a probable factor in predisposition to mycotic infections.

Dermatologic Expressions of Other Underlying Pathologic Conditions

Toxins, either specific or of gastro-intestinal origin, are a large factor in the production of a majority of our more commonly encountered skin eruptions. Anaphylaxis, allergy, and sensitization are as a rule underlying causes in all these conditions. It is important to note that various drugs may at times cause almost any form of cutaneous eruption. These expressions may be in the form of a simple pruritus, a vasomotor disturbance such as hyperemia, macular or papular eruptions, or the more common occurrence of wheals. Hyperpigmentation and keratoses often are the result of prolonged use of arsenic. The pustular and granulomatous lesions are most often caused by the iodids and bromids. Foods may be directly responsible for an eruption, due to a particular hypersensitization or to faulty habits of eating. Unbalanced diet, especially an increased protein or carbohydrate intake, is suggested by various dermatologic conditions. In my experience, regulation of diet, together with control of constipation, are of great importance in dermatologic therapy. Since the use of skin-sensitization tests, allergy has been definitely proved to be the underlying factor of many skin conditions.

The exanthemata, as well as many infectious diseases, are readily diagnosed through their cutaneous manifestations. Toxins of bacterial or infectious nature are definitely responsible for their occurrence. Rosenow, in his work on focal infection, has proved beyond doubt that certain skin lesions are the direct result of focal infection, such as septic teeth and tonsils. Lupus erythematosis, erythema multiforme, and the tuberculids should at once suggest focal infection as an etiologic factor. Guy reported two very interesting cases of tuberculids in which the element of focal infection was gastro-intestinal, the result of enteroptosis.

Malignancy and tuberculosis, our two most dreaded diseases, can in a few cases be diagnosed early by cutaneous lesions even before constitutional symptoms have developed. Acanthosis nigricans is a disease characterized by symmetrical areas of pigmentation and warty thickening of the skin. This condition usually occurs around the flexures, and in practically all reported cases has been associated with abdominal carcinoma. An unexplainable pigmentation in all cases should suggest to the examiner the possibility of visceral cancer. I recently had a patient who presented nodules of the skin in which a pathologic diagnosis of metastatic carcinoma established the diagnosis of an obscure abdominal tumor. The lentiginous metastases of formerly removed carcinoma of the breast are often the first signs of a recurrent malignancy of deeper structures. The occurrence of melanocarcinoma of the skin may at times lead to the diagnosis of a similar process in deeper structures. Pulmonary tuberculosis may first be suggested in some cases by the discovery of grouped follicular lesions characterized by small yellowish, horny papules—a condition known as lichen scrofulosus. Erythema nodosum, erythema induratum, acne scrofulosorum, acnitis, folliculitis, and lupus vulgaris, especially when occurring in strumous individuals, should readily suggest the probability of a coexisting pulmonary or visceral tuberculosis. Stokes has reported an interesting case of tuberculous erythema nodosum in a patient who later died of a tuberculous meningitis.

Space permits only mention of the great significance of active syphilodermata or syphilitic scarring in the consideration of all internal medical conditions. Syphilis is a chronic, specific, systemic disease, and its cutaneous expressions should be seriously consulted in the differential diagnosis of practically all medical conditions. A woman presents herself to her internist because of frequent miscarriages. A blood Wassermann test may be negative. The exquisite draping of the patient for a pelvic examination prevents the examiner from using anything except two fingers as a diagnostic weapon. He may find a slight misplacement and advise treatment accordingly, but to no avail. If he, on the other hand, would be one of the few with a high index of suspicion toward syphilis as the probable cause, he would disrobe his patient, do a careful dermatologic examination, and in many cases discover a scar, a leukoplakia, or possibly an active nodulo-ulcerative lesion, and thus arrive at a proper diagnosis. Similarly, a careful examination of the skin may disclose leads which will greatly aid in the diagnosis of enlarged livers, cardiovascular pathology, osseous lesions, gastric tumors, or obscure lesions of the central or peripheral nervous system.

Certain diseases of the hematopoietic system

first manifest themselves by suggestive skin lesions. Lymphoid or myelogenous leukemia can at times be diagnosed by their skin expressions when the blood findings are normal. Butler reported a very interesting case of lymphatic leukemia in which a pathologic examination of skin tumors established the diagnosis while the blood count was still normal. Later in the course of the disease, the blood assumed the characteristic picture of leukemia. An intense unexplainable pruritus, or recurrent attacks of a papular, vesicular, or urticarial rash of undetermined cause should suggest a blood count because of a possible underlying leukemic condition. Similarly, tumors of the mediastinum, a deep adenopathy with a stubborn, intolerant itching or papular, vesicular, urticarial, or eczematous eruption should suggest the possibility of Hodgkin's disease, or lymphosarcoma.

These few citations and experiences serve merely to indicate the future trend of specialism. All specialties are only branches of the science of medicine. To serve his patient to the best advantage, one must consider his presenting symptoms from all angles. This requires the utilization of his knowledge of all modern developments in medicine. Unless he is a master of the entire science he should not hestitate to call upon his fellow specialists in the solution of his many problems.

ETIOLOGY AND TREATMENT OF PRIMARY PRURITUS

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The sensation of itching which occurs unassociated with any cutaneous manifestations, other than those which arise secondarily due to scratching, often taxes to the utmost the ingenuity of the consulting physician who would unravel its pathogenesis. It is also a sensation which taxes to the utmost the patience of the afflicted one, when it is severe. It might be said that an itching skin downs conscience, for, in spite of knowing that great harm may be done by scratching, the individual will not cease to exercise this privilege until the pruritus is changed to warmth or pain. Shakespeare has said that "the itch hath murdered sleep," and this is literally true in almost every case, for a pruritus of any degree of severity will invariably preclude all rest until relieved or until the cause is removed. For this reason it is of importance that every effort should be made in cases of this type to seek out the true etiology and remove this where possible.

Although pruritus is usually referred to as though it were a disease *per se,* the term is a metonym for an underlying metabolic disturbance of toxic cause. Pruritus is a sensation and therefore a symptom, and was defined by Bronson in 1891 as "a nervous derangement involving some molecular or anatomical change that disturbs normal relations." In order to simplify the search for the "molecular or anatomical change," the following table of possible causative factors is suggested.

(1) Changes in the skin itself.
  (a) senile pruritus.
  (b) pruritus hiemalis, or winter itch, and pruritus æstivalis.
  (c) bath pruritus.
(2) Changes in the blood due to
  (a) drugs (opium, cocain, alcohol).
  (b) focal infections
  (c) lymphatic diseases (Hodgkin's disease, lymphosarcoma).
  (d) diabetes.
  (e) disease of the liver or gall bladder.
  (f) nephritis or calculus.
  (g) intestinal toxemia.
  (h) hyperuricemia (?)
(3) Functional or organic nervous disease.

The term senile pruritus is used rather promiscuously for any persistent itching occuring in an elderly person, and is supposedly due to atrophic changes in the skin. However, it is a mistake to come to this conclusion too hastily in such a case, for this is the very type of patient who would be likely to have one of the diseases in group 2 above which might account for his itching. Luithlen *(New York Medical Journal and Record,* August 1923, p. 218) has recently suggested that the itching in a true case of pruritus senilis is due to a deficiency of silicic acid in the tissues.

In pruritus hiemalis and pruritus æstivalis, there is a definite relation between the exciting cause and the effect. Pruritus hiemalis presents itself at the beginning of cool weather and persists into the late spring. Stellwagen observed that this condition occurs chiefly in individuals whose skin sweats too little and is lacking in natural oiliness. Underlying causes doubtless operate in pruritus hiemalis, external cold acting merely as an exciting factor. Pruritus æstivalis, which is much less common, occurs in extremely hot weather, and may possibly be due to irritation from sweat. It is altogether likely that in these cases there is some obscure metabolic disturbance.

Recently the writer was consulted by a sailor with the complaint of severe itching following a bath. This form of pruritus was first described by Stellwagen *(Philadelphia Medical Journal,* October 22, 1898), who states that the actual cause is the water, and that this condition occurs in individuals with a dry, harsh skin. Even sof-

tening or alkalinizing the water by adding starch, soda, or bran seems to have no effect in preventing the attack.

It is group 2, in which the pruritus is apparently due to circulating toxins in the blood, that commands the greatest interest, for a most careful search may be necessary to unearth the particular etiologic factor.

Textbooks tell us that certain drugs, such as opium and its alkaloids and cocain, may give rise to pruritus. It is paradoxical that morphin will often act almost as a specific in relieving pruritus. Recently cases called "gin itch" have been observed, in which a generalized pruritus followed the drinking of cheap synthetic alcoholic liquors.

Focal infections are blamed for many of the ills of mankind, but cases are not infrequent in which no other discoverable cause can be found for a persistent itching than an abscessed tooth.

In the lymphogenic diseases, itching is often the first symptom, and the underlying disease may not become manifest for a variable period of time. A case from the practice of Dr. J. F. Schamberg well illustrates this point.

CASE 1.—A middle-aged woman presented herself for the treatment of an extremely severe and persistent pruritus. She had been under the care of physicians in her home city for some months without benefit and without any underlying pathologic condition being discovered. Examination at this time revealed a generalized adenitis, the glands not yet being visible, but easily palpable. A diagnosis of Hodgkin's disease was made, and this was confirmed by the subsequent course of the attack, the woman dying a few months later with marked general enlargement of all the glands.

Too well do we know that a general pruritus may be the precursor of granuloma fungoides, a disease which is invariably fatal.

Even though its presence be suspected when we are confronted with a patient whose chief complaint is pruritus, diabetes may be easily overlooked, and not detected upon routine urine examination.

CASE 2.—Mrs. F., aged 48, first presented herself in 1925 with a complaint of pruritus of the vulva and perineum. At this time the urine was negative for sugar. Following treatment with mild doses of x-ray, and local soothing applications, the pruritus was relieved. In September, 1926, this patient again appeared with a complaining of severe pruritus in the perineal region and a slight generalized itching. Urine examination was again negative for sugar, but owing to the severity of the perineal pruritus, a blood chemical examination for sugar was ordered. The resulting report showed a blood sugar of 175 mg. per 100 c.c., an amount well above normal. Under a dietary régime and treatment with insulin the itching promptly disappeared.

An abnormally high blood sugar is not a common cause of itching in these cases, as is evidenced by the accompanying table, in which the upper limit of the normal was passed in only two cases out of sixty.

When jaundice is present as an accompaniment to disease of the liver or gall bladder, generalized itching will invariably be experienced. However, the pruritus often precedes the development of any other skin manifestations, and appropriate examination will reveal the underlying disturbance. A case of pruritus has been described by Zeisler *(J. A. M. A.*, 85:1689; 1925), in which a blood examination disclosed an excess of bilirubin when there was no jaundice. On account of gastric symptoms, laparotomy was performed, and a partial obstruction of the ampulla of Vater was found, together with marked pancreatitis. The operation gave complete relief from the pruritus. In this case, although there was no jaundice, there was sufficient obstruction to the flow of bile to produce the excess of bilirubin in the blood. Schamberg in Unna's *Fiftieth Anniversary Festschrift* published a case of "Persistent Pruritus With Urobilinuria Without Jaundice."

The following case described by Dr. J. F. Schamberg and seen also by the writer is of interest because the pruritus preceded the development of jaundice by several days.

CASE 3.—Mrs. O., aged 55, presented herself for treatment of a severe generalized pruritus. Although there was no jaundice at this time, and no symptoms pointing to disease of the liver or gall bladder, a chemical examination of the blood was ordered, and it revealed a pathologic amount of bilirubin. One week later, the bilirubin had further risen, and again four days later there was a rise. At this time the skin and conjunctiva had a distinct yellowish discoloration.

It is well known that pruritus may be an early symptom of an acute nephritis. It may also be one of the earliest signs of renal calculus.

CASE 4.—Mrs. S., aged 26, awoke in the night with a severe itching of the entire cutaneous surface. This pruritus continued for two days, at the end of which the urine was observed to be a deep wine color. Microscopic examination showed a heavy precipitate of red blood cells. X-ray examination showed a shadow in the region of the pelvis of the left kidney about the size of a small lima bean, suggesting the presence of a calculus.

Toxins elaborated in the intestines may produce a generalized pruritus, together with other symptoms which collectively are characteristic of intestinal toxemia. Such symptoms as frequent headaches, lack of "pep," a tired feeling in the morning, floating specks before the eyes, and cold hands and feet suggest starch intolerance, and when accompanying a complaint of "itching" make the diagnosis of autointoxication tenable.

I have placed hyperuricemia last in group 2, for its relationship to the pruritus in the cases

in which it was present remains a moot question. A study of the accompanying table shows that in 26 cases out of 60, uric acid was present in an amount above the upper limit of normal, which has been set by Folin at 3.7 mg. per 100 c.c. of blood (Folin and Wu method). In other words, 43 per cent of the total number of cases showed an hyperuricemia, with no other cause discoverable for the itching, although no tests for bilirubin were made in this series. Nineteen of the 26 cases with this finding were relieved partially or entirely of their pruritus upon a purin-free diet, although in all fairness I will say that local antipruritic remedies were also used. It is certainly suggestive that in pruritus as well as in eczema, which is almost invariably accompanied by itching, there is a considerably greater number of patients showing an excess of uric acid than occurs in other dermatoses (Schamberg: *Archives of Internal Medicine,* 32:203; 1923). Michel *(Archives of Dermatology and Syphilology,* vol. 14, 1926) has recently shown that the cases of eczema which present an excess of uric acid in the blood are not made worse by the intravenous injection of lithium urate. He tends to minimize hyperuricemia as a possible etiologic factor. Theoretically it is possible that the uric acid in these cases indicates the presence of some other toxic substance in the blood not discoverable by present chemical means. Further study on the question is necessary to enlighten us as to the reason for a hyperuricemia in such a large percentage of these cases.

Table Showing Blood Chemical Studies in Sixty Cases with a Chief Complaint of Generalized Itching.

Case No.	*Sex*	*Age*	*Nonprotein Nitrogen*	*Urea Nitrogen*	*Sugar*	*Uric Acid*
1	M	85	25	14	110	1.8
2	M	68	32	15	113	2.1
3	F	42	37	15	82	4.0
4	F	70	38	20	273	3.7
5	M	22	30	13	108	5.4
6	M	42	40	16	88	6.4
7	F	53	38	19	98	2.4
8	M	78	38	18	99	4.7
9	M	38	35	17	102	4.0
10	M	52	40	19	108	4.0
11	M	33	36	16	101	4.7
12	M	60	49	26	117	3.5
13	F	58	40	22	109	4.3
14	M	20	33	17	70	5.2
15	M	69	32	15	90	5.0
16	F	73	27	13	86	3.3
17	M	73	39	21	80	3.2
18	M	30	28	14	55	3.3
19	F	..	45	26	71	4.0
20	M	31	24	10	77	2.5
21	F	56	34	14	86	2.5
22	F	26	30	14	80	4.2
23	M	35	..	12	82	3.7
24	F	..	..	..	..	2.4
25	M	53	37	19	116	5.1
26	F	54	39	20	78	5.0
27	M	73	35	19	354	4.5
28	F	75	39	22	101	6.1
29	M	55	30	14	77	5.4
30	M	73	39	21	115	2.5
31	M	77	41	24	67	5.2
32	M	25	28	14	99	2.0
33	M	52	..	15	91	3.0
34	F	62	33	..	96	2.6
35	M	67	36	18	122	5.8
36	M	40	38	18	76	3.8
37	M	80	42	24	100	3.6
38	M	44	28	12	104	5.4
39	F	53	28	14	92	2.7
40	M	75	30	15	92	5.6
41	M	20	31	14	44	4.2
42	M	91	34	16	104	3.4
43	M	55	31	15	100	2.4
44	F	..	34	16	95	3.3
45	F	69	30	14	99	4.5
46	F	34	31	14	98	6.2
47	M	47	26	10	90	2.8
48	F	..	32	15	89	2.6
49	F	34	37	16	96	2.7
50	F	86	42	23	91	3.4
51	M	35	39	20	100	2.8
52	F	43	41	22	100	5.1
53	F	46	39	20	102	3.2
54	M	63	31	17	130	4.0
55	M	..	34	17	96	3.4
56	F	50	46	26	67	3.2
57	M	70	32	15	98	3.2
58	M	38	34	11	102	3.1
59	M	54	..	..	...	3.2
60	F	22	30	14	100	3.3

There are a number of other conditions in which a pruritus may be present, among the more common of which are tuberculosis, carcinoma, pregnancy, prostatitis, menstrual disturbances, etc. In such cases the pruritus is rarely a primary manifestation.

It is unfortunate that we are forced by the inexactness of medical science to fail in a large number of cases of pruritus to unearth the cause. Such cases are quite apt to be classified in group 3, as due to functional or organic nervous disease, by far the majority falling under the former heading, which serves as a scrap heap. Undoubtedly, many cases of pruritus are of purely nervous origin, but such a conclusion should be reached in a given case only when there is marked evidence of a nervous indisposition, and all other etiologic possibilities have been ruled out. Darier states that nervous pruritus is commonly observed among social failures, unhappy inventors, mental defectives, as a result of too much work or too much play, and as a sequel of an emotional disturbance. The original depression is aggravated by the constantly recurring distress and by insomnia, leading to neurasthenia and melancholia. Dr. Schamberg has related to me the case of a highly neurotic young man who contracted pediculosis

pubis. After this was cured the itching in the pubic region persisted despite all therapeutic measures. He developed what might be called the "pruritic habit." Less frequently there is a true organic cause, such as hemiplegia, brain tumors, general paralysis, and tabes.

TREATMENT

By keeping in mind the etiologic possibilities, as outlined in the accompanying table, and attempting properly to classify the case in question, the treatment of pruritus is much simplified, but is apt to be difficult even under the most favorable conditions. No matter what the primary cause may be, the nervous stability of the patient is apt to be more or less deranged, due to the constant torment, the skin becomes excoriated and sometimes thickened from the scratching, these factors thus tending to continue the itching even when the true cause is removed.

Of the internal remedies, bromids and cannabis indica are of paramount value, serving to quiet the nerves. Bromids may be given by mouth in doses of 5 grains three or four times daily, or may be given intravenously, 5 c.c. of a 10-per-cent solution in physiologic salt solution being given the first day, 10 c.c. on the second day and following days. Tincture of cannabis indica, strongly recommended by Crocker, is often of great value. Beginning with a dose of ten minims t.i.d., the dosage may be increased two drops daily until from 25 to 30 minims are being taken three times daily: In extremely stubborn cases morphin will often prove a valuable remedy.

General dietetic and hygienic measures are of importance. The diet will necessarily depend upon the findings in a given case. Avoidance of red meats, internal organs, and sweets is recommended. Attention should be given to the intestinal tract. The bowels should be kept well open, and if there are symptoms of intestinal stasis, high colonic irrigations may prove of great value. When there are symptoms of starch intolerance, obviously sugars and starches should be deleted from the diet.

In difficult cases the writer has found that foreign-protein therapy will result in an abatement or entire cessation of the pruritus. A four-per-cent suspension of milk protein may be used, from one to five c.c. being injected into the deep muscles of the buttocks at intervals of from three to seven days. This may or may not produce a slight febrile reaction, but the patient should be warned of the possibility of this happening. Two cases which failed to respond to any other therapeutic measures, and in which all examinations failed to reveal any etiologic factors were entirely cured by injections of the milk protein. The rationale of this procedure is as yet little understood. It must be used empirically.

Basing his treatment on the deficiency of silicic acid in the tissues of elderly people, Luithlen injects this acid for senile pruritus. A one-per-cent solution is used, the first injection being 0.5 c.c., the dose being increased to 1 c.c. and 2 c.c. upon subsequent injections, which are at two-day intervals. A simple but unusual therapeutic procedure for the treatment of senile pruritus is suggested by Veress *(J. A. M. A.* 83; 133; 1924), who finds that the itching is invariably relieved by rubbing the skin over the prurigenous area with a soft brush, for from 20 to 25 minutes two or three times daily. The brushing removes the epithelial debris, which Veress believes is the cause of the itching.

External therapy is usually necessary, though rarely does it alone effect a cure. One of the simplest procedures consists of the use of special baths, made by adding starch, soda, or bran to a half tub of warm water, allowing the patient to remain in this bath from fifteen minutes to an hour, and then patting the body dry with a soft towel. Antipruritic lotions and dusting powders will often give symptomatic relief, but care should be taken that these are of a nonirritating nature. For persistent prurigenous patches, mild doses of roentgen therapy may be used. Klauder *(J. A. M. A.,* 85; 1683; 1925) recommended psychotherapy in treating pruritus of nervous origin, in the hope of producing a transformation of mental attitude, and in dispelling the fear and dread of the itching.

It is impossible, in a paper of this length, to do more than outline the main therapeutic procedures, particularly those that the writer has found to be of value. As a final admonition, I would say that there can be no routine therapeusis for a symptom which may be due to one of a large number of causes.

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DRUG ERUPTIONS*

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Drug eruptions and dermatitis medicamentosa are synonymous terms applied to eruptions due t the action of drugs, exclusive of those produced by their local irritating effects. Thus it is necessary that the medication be absorbed from the gastro-intestinal, respiratory, or genito-urinary tract, from wounds, by hypodermic administration, or absorption through an unbroken

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skin surface, as from a belladonna plaster or a mercurial inunction. These eruptions occur much more frequently than is generally supposed, for physicians other than dermatologists pay but scant attention to the subject. Because of their frequency in general practice, because of the protean character of the eruptions, and because of the widespread and indiscriminate use of proprietary medication containing a great variety of active drugs, it behooves the physician to familiarize himself with the principal points bearing on the differential diagnosis and treatment of drug eruptions.

Individual cases occur as the result of idiosyncrasy, overdosage or too prolonged administration of drugs, or mal-elimination. The drug at fault may act directly through the circulation, in the course of elimination by way of the glandular apparatus, or indirectly through the vasomotors. It may produce congestion, exudation, granulomas, and even at times necrosis. The histopathologic picture is not distinctive, but approximates somewhat that of the condition imitated clinically.

A comparatively small group of drugs accounts for dermatologic pictures which are not at all diagnostic of the drug at fault. In by far the greater number of cases the appearance of the eruptions alone is likely to be misleading because of their similarity to known clinical entities independent of the action of drugs. In general, drug eruptions of the latter class are likely to appear suddenly, tend to symmetrical generalization, and are usually a brighter red than those eruptions imitated. General symptoms, while usually absent, may be marked, and the same statement applies to subjective symptoms. Special areas of predilection are the face, neck, forearms, and legs below the knees. In character they may represent all the cutaneous lesions that are described, from transient erythema to gangrene. It is further to be borne in mind that a given drug may produce a variety of eruptions, and that many drugs may give rise to eruptions which are clinically indistinguishable. An excellent "rule of thumb," to which, of course, there are exceptions, is that with syphilis and the exanthemata excluded, a sudden-appearing, symmetrical, bright-red eruption suggests a drug origin. Some idea of the potentialities of certain drugs may be gained by referring to the following table prepared by Crocker, and modified and amplified by Highman.

Erythema. Arsenic, antipyrin, belladonna, boric acid, bromids, cantharides, capsicum, chlorate of potash, chloral, copaiba, dichloramin-T and Carrel-Dakin solution, digitalis, iodids, iodoform, mercury, morphin and its derivatives, pyramidon, phenacetin, phenolphthalein, quinin, salicylates, sera, strychnin, sulphonal, veronal.

Vesicles. Antipyrin, arsenic, bromids, cantharides, cannabis indica, capsicum, chloral, copaiba, dichloramin-T and Carrel-Dakin solution, ergot, iodids, morphin, quinin, salicylates, sera, sulphonal.

Bullæ. Antipyrin, arsenic, cannabis indica, copaiba, chloral, iodids, mercury, opium and its derivatives, quinin, salicylates, sera.

Wheals. Antipyrin, arsenic, bromids, copaiba, iodids, iodoform, quinin, salicylates, sera.

Pustules. Arsenic, bromids, chloral, iodids, mercury, salicylates.

Purpura. Antipyrin, arsenic, chloral, ergot, iodids, iodoform, mercury, quinin, salicylates, sulphonal.

Erythroderma. Arsenic, arsphenamin, mercury.

"Eczema." Arsenic, iodoform, mercury.

Necrosis. Arsenic, ergot, iodids.

Hyperkeratoses. Arsenic.

Granulomas. Bromids, iodids.

Herpes. Arsenic, arsphenamin.

Cyanosis. Antipyrin, acetanilid.

Pigmentation. Arsenic, silver, bismuth, lead.

Mucous Lesions. Arsenic, bismuth, lead.

Angioneuroses. Aspirin.

Certain drugs give rise to more or less characteristic eruptions, and therefore deserve special attention. However, even drugs of this group are not always productive of diagnostic skin lesions; as will be noted, they are capable of producing skin manifestations which in no way resemble the typical and usual lesions.

Arsenic. The lesions may be erythematous, scarlatiniform, papular, vesicular, herpetic, pustular, urticarial, pigmentary, keratotic, ulcerative, or carcinomatous; but the usual picture after long-continued use of arsenic is the progressive appearance of erythema, pigmentation, keratoses, and epitheliomata, the tendency being especially marked on the palms and soles. It is to be noted that these changes may not appear for months or years after the drug has been discontinued. Such preparations as Fowler's solution, arsenous acid, cacodylate of soda, etc., should not be administered continuously for longer than ten weeks. The arsphenamins produce acute or chronic eruptions in certain cases. The erythematous generalized eruption may appear a few hours after an intravenous injection, but more often is delayed until after several injections. A fixed type of eruption appears as sharply marginated plaques which flare up with successive injections of the drug, and usually leave some permanent pigmentation. The chronic type appears after several injections or after a lapse of considerable time as a maculopapular or lichenoid type of eruption more or less generalized or with a predilection for the extensor surfaces. Generalized exfoliating dermatitis, herpes simplex, and herpes zoster also are seen at times.

Bromids may produce a variety of lesions, but the usual type is slow-developing acneform or nodular granulomatous lesions. The eruption appears more commonly on the face and extrem-

ities. Lesions of the nodular type tend to coalesce, forming elevated verrucous-surfaced plaques studded with follicles distended with pus. Exaggerated cases suggest sarcoma. In children, lesions tend to the hypertrophic variety, with a predilection for the face, and occur as the result of direct medication or of receiving the drug through the mother's milk. These lesions resemble blastomycosis, but the latter is usually a single very chronic lesion from which the organism can be recovered. The history of use of the drug is, of course, of value, it being necessary to remember that various proprietaries such as bromoseltzer contain considerable amounts of the salts of bromin.

Iodin and its compounds may produce a variety of lesions, as do also the other members of the group under discussion, but the most frequently seen is the acneform type similar to but smaller than that due to bromids. Erythematous, vesicular, bullous, and purpuric eruptions also occur. Ordinary acne is usually aggravated by the administration, this occurring more frequently than is generally supposed, because patients with acne are prone to self-medication with iodid-containing blood purifiers.

Silver. The salts of this metal, as Pusey says, produce "a tatooing from within," with the production of a slate-gray pigmentation, particularly of uncovered parts of the body.

Belladonna. In addition to the general symptoms produced by this drug, a scarlatiniform, more or less generalized eruption rather frequently occurs. The appearance of erythemas in association with the use of "eye drops" is noteworthy, as is that occasionally seen following absorption from a belladonna plaster.

Phenolphthalein. Due to the widespread use of proprietary laxatives containing phenolphthalein, many cases of the resulting eruption have been seen. In patients particularly susceptible, rounded erythematous macules appear without subjective symptoms, to be followed by pigmentation, old patches flaring up, and new ones frequently appearing upon repeated administration of the drug.

Serums. According to Sequeira, a third of the patients injected with antidiphtheritic serum develop eruptions which it has been found are due to the serum itself and not to the antitoxic principle. Any serum, antistreptococcic, antitetanic, antityphoid, etc., may produce the same type of eruption, which is a combination of urticaria and polymorphic erythema, accompanied by such general symptoms as elevation of temperature, head, back, and limb pains, and considerable prostration. The eruption may appear within twelve hours, or be delayed for two or three weeks following injection of the serum. The eruption persists for from one to five or six days. The wisdom of including serum eruptions under the heading of dermatitis medicamentosa may be questioned, but their frequency and their clinical similarity to others of the group make their joint consideration advisable.

TREATMENT

Inasmuch as the most important therapeutic measure in the treatment of disease is removal of the cause, withdrawal of suspected medication is of prime importance in the treatment of cutaneous lesions due to drugs. In the majority of cases nothing further is necessary. At times, topical applications are indicated in keeping with the clinical status of the eruption—astringent lotions on oozing surfaces, antipruritics when needed, etc. Elimination should be facilitated by all routes. Under such management, recovery is usually prompt. In some instances, as in the case of phenolphthalein eruptions, pigmentation persists for months or years; in others, as in argyria, the pigmentation is more or less permanent, there being recorded, however, several instances of improvement following the administration of hexamethylenamin. In a case of Dr. Beinhauer's a remarkable improvement was obtained by the use of sodium thiosulphate intravenously.

In a few instances, physiologic antagonists of the drug at fault may be of service. Thus small doses of opiates are useful in the toxicoderma due to belladonna. In granulomatous lesions due to bromids and iodids, salicylic-acid plasters are valuable, as are also x-rays and radium. Of particular service in the bromodermas is the intravenous use of decinormal sodium chlorid, as recommended by Wile. Relief of pain, when present, is prompt, and resolution of the lesions is considerably hastened. In babies the same preparation may be used by way of the jugular vein or fontanel when other veins are not available. The administration of arsenic with bromids was suggested by Crocker as a prophylaxis against bromid eruptions. I am convinced that increasing the amount of salt in the diet during the administration of bromids is an efficient prophylaxis. The preliminary desensitizing injection before administration of serum certainly reduces the frequency of reactions. Locally, antipruritic lotions are of service, and adrenalin hypodermatically is indicated. Calcium salts are also helpful at times.

The dearth of specific medication, the generally unsuspected frequency of the condition, and the imitative character of drug eruptions makes their recognition of paramount impor-

tance. To the physician who is on the lookout for these manifestations, the solution of otherwise puzzling cases will be simple. To this end it is suggested that patients with eruptions such as those briefly described above be closely questioned regarding internal or topical medication, either prescribed or proprietary.

ABSTRACT OF DISCUSSION

Of Symposium on Dermatology in Relation to Internal Medicine

Lester Hollander, M.D. (Pittsburgh, Pa.): The rôle of syphilis in itching dermatoses is seldom emphasized sufficiently. It is frequently stated that if a skin condition is associated with itching, syphilis can be ruled out. I have studied and reported two cases of generalized urticaria definitely due to syphilis, which cleared up after antisyphilitic treatment was instituted. Dr. Hazen, of Washington, has found that almost 33 per cent of the cases of chronic urticaria in the negroes coming to his clinics were due to syphilis.

About four years ago a middle-aged man came to me with an intense pruritus ani. He had been treated with the roentgen-ray, and had a severe burn as a result. Nothing seemed to relieve this patient. His itching was intense, and the man actually became a morphin addict in his attempt to obtain relief. After two years with me, he went to Dr. Jacob, who could not relieve him. He then went to another physician, who found a positive Wassermann, and after a short period of treatment the patient became much better. Two similar cases have come under my observation. One patient with pruritus ani, who was treated with the roentgen ray and who also had a positive Wassermann, recovered after a few injections of bismuth. The other patient was a woman with an intense pruritus vulvæ which nothing seemed to affect. She had a negative Wassermann, but, bearing in mind the two previous cases, I put her on a therapeutic test. After three weeks the pruritus was greatly ameliorated.

Before using large quantities of salt solution intravenously in treatment of bromoderma, one should be certain of the kidney function of patients, also of their blood pressure. High blood pressure is a distinct contraindication to sodium-chlorid therapy of this affection. There are some patients in whom the intravenous use of sodium chlorid is not practical. In these cases I have used a salol-covered sodium-chlorid tablet made by Hynson, Westcott and Dunning, of Baltimore. Large doses of salt can thus be given by mouth. In addition, I use a moist dressing of sodium chlorid locally. The action seems very satisfactory.

Fred D. Weidman, M.D. (Philadelphia, Pa.): In a case in which the intravenous administration of sodium chlorid was difficult because of the obesity of the patient, large quantities were given by mouth, and also once by hypodermoclysis. Within three weeks the eruption, which was extreme, had entirely cleared up.

The test for the bromids and iodids in the urine is not performed frequently enough. The test for iodin is very simple, and the simple one for bromids by potassium permanganate and sulphuric acid is satisfactory when there are large quantities of bromid present; but where there are only traces, I have often been unable to distinguish between the odor of bromids and that of normal urine heated and subjected to the action of sulphuric acid. While there are more complicated tests extant, the general practitioner has need of one which will provide ready recourse for the detection of bromids in the urine.

Frank C. Knowles, M.D. (Philadelphia, Pa.): During the last month I have seen an extremely severe eruption due to the ingestion of iodids in an individual with nephritis. The cauliflowerlike tumors were sufficiently large to close the eyes entirely, and hemorrhagic lesions were present on the extremities. Marked improvement was observed within a week after daily intravenous injections of sodium chlorid were administered.

William H. Guy, M.D. (in closing): We believe that bromid eruptions can be prevented to a large extent by the conjoint use of sodium chlorid with bromids. This can be administered in pill form, as Dr. Hollander mentioned. Bromoderma has not appeared in any case where this method has been used, but not a sufficient number of cases have been observed to warrant any conclusion. The comparative infrequency of bromoderma in patients taking the drug may entirely negate the observation.

Examination of the urine, as pointed out by Dr. Weidman, is quite necessary, but we have been unable to find any bromin in the urine either before or after the administration of sodium chlorid. This may have been due to the difficulty of demonstrating the presence of comparatively small amounts of bromin.

In one case some kidney irritation was evidenced by casts and albumin after the first administration of sodium chlorid. That is the one thing that is to be guarded against constantly in this treatment of bromid eruptions.

A Critical Review of Encephalitis*

THE PROBLEM OF ACUTE ENCEPHALITIS FROM THE INTERNIST'S VIEWPOINT

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Encephalitis lethargica has been known since the time of Hippocrates, but was not separated from the meningitides until about 1820. In the years 1889 to 1890 an outbreak of encephalitis lethargica was reported in Germany, Austria, and northern Italy. It is significant that this epidemic followed the influenza outbreak of those years. Cruickshank shows a distinct relationship between the outbreak of influenza and encephalitis lethargica at various times during the last 450 years. It is curious to note that the term "sleeping sickness" popularly used, was applied by Camerarius in 1718 when he reported an epidemic of influenza and a number of cases of "Schlafkrankheit." It has also been called "coma somnolentum" and "soporosite," and it remained for recent writers to coin the term encephalitis lethargica. Von Economo in 1917 reported the disease in Austria which he char-

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acterized by marked drowsiness and ocular palsies. In 1918 a similar epidemic was described by Netter in Paris, and about the same time by Harris and Hall in England. It appeared in United States the latter part of 1918. MacNalty of England makes the following pertinent statement in a recent article (June 26, 1926): "For practical purposes the disease is a new phenomenon."

INCIDENCE

Complete statistics unfortunately are not available, and those available are skeletonized to such an extent that they are unimpressive. For Pennsylvania alone the following figures are submitted:

Year	*Cases*	*Deaths*
1920	51	...
1921	56	100
1922	115	102
1923	137	165
1924	74	110
1925	62	129

Although encephalitis lethargica is a reportable disease in Pennsylvania, it is readily seen that case reporting is not adhered to so completely as it should be. In fact, but twelve states at the present time are required to report this disease.

For the thirty-nine states in the registration areas of the United States, the following figures are submitted:

Year	*Deaths*
1919	589
1920	1,505
1921	1,709
1922	1,284
1923	1,988
1924	1,295
1925	1,541

In 1925, 69 large cities reported 856 cases, with 646 deaths (75.3%). Of this number, New York City reported 327 cases, with 185 deaths; Boston 59 cases, with 31 deaths; Chicago 49 cases, with 17 deaths; Birmingham 55 cases and one death; Philadelphia 42 cases, with 31 deaths. In 165 small cities, 156 cases were reported, with 140 deaths (89%). The inconsistency of some of these figures is apparent; but it is due to the fact that not sufficient time has elapsed properly to organize registration areas.

TYPES

In the light of present knowledge it is most difficult to classify cases of encephalitis lethargica unless it be according to location of pathology or groups of presenting symptoms. For such a classification, that of the American Association of Research is rather complete:

1. Somnolent-ophthalmoplegic type (febrile or afebrile).
2. The paralytic (akinetic or hypokinetic) type.
3. The amyostatic type (parkinsonlike and cataleptic syndromes).
4. The hyperkinetic type (myoclonic, choreic, and epileptic forms).
5. The psychotic type (delirious, manic, and depressive forms).
6. The hyperalgesic type (painful forms).
7. The tabetic type (Argyll Robertson pupils, with loss of deep reflexes and sometimes with lancinating pains).
8. The ataxic type.
9. The abortive type (imperfect, rudimentary, and ambulatory forms).

One might become easily confused in following such a classification because of the existence of the symptoms of certain types with those of other types and the almost kaleidoscopic change from one division to another. Buzzard and Greenfield divided their cases, based on pathology, into three main groups:

1. Those exhibiting hemiplegias, hemianesthesia, or hemianopia.
2. The basal-ganglion group, or those resembling paralysis agitans.
3. Cases characterized by disturbances of function of the cranial nerves.

SYMPTOMATOLOGY

The symptoms of the incubation and prodromal periods are usually those of any acute infection, such as lassitude, malaise, headache, and irregular fever. As the infection progresses, it becomes more marked, and exhibits nausea and vomiting; headache becomes more severe, and takes on the features of central nervous involvement, such as double vision, lethargic somnolence, ptosis, ophthalmoplegia, external or internal paralysis of muscles supplied by the facial nerve, as well as those of the tongue, pharynx, and rarely those of the limbs. A peculiar phenomenon may be spasm of the eye muscles lasting from one to three hours. Respiration may be rapid, not due to air hunger, but to irritability of the cells of the respiratory center. If death occurs early in the disease, it will most likely be due to paralysis of the nerve center governing respiration. The onset, again, may be so mild that the seriousness of the infection is not realized until involvment of the central nervous system is observed.

The individual may exhibit lethargic somnolence, and again show great irritability, excitability, and insomnia. Charles S. Potts states that delirium, stupor, and mental clearness may alternate, and that children are especially prone to develop mental disturbances. After a few days somnolence, the patient may become wide awake and quite talkative. With structural

changes in the subthalmic area, there is subsequent change in personality. The polarity of the individual becomes changed, and he may become negativistic. In such cases, the diagnosis may be missed entirely, and the patient may be sent to the hospital for mental diseases. Delirium may become very marked and an acute mania develop. Catatonia is occasionally observed.

Neal, Jackson, and Applebaum, in their study of 450 cases, state that one of the most striking of the motor symptoms which is found in a certain proportion of the cases is hypertonicity of the muscles. This is shown in the masklike expression of the face, in the general muscular rigidity, and in the slow movements. The rigidity of the neck due to this general hypertonicity must be sharply differentiated from that due to inflammation of the meninges. These observers state again that practically any form or combination of forms of extremity paralysis or paresis may occur, usually of the spastic type. Periods of remission may occur, followed by a relapse, when the symptoms become marked as they were previously. Both the Babinski and Brudzinski signs are common, as is also Kernig's. In fact, any sign or group of symptoms, resulting from mild engorgement to intense perivascular inflammation of any part of the central nervous system, may be seen. Convulsions are common in children, and tremors, fibrillary twitchings, or choreiform or athetoid movements may be found.

Differential Diagnosis

During the past year we had in our community an epidemic of scarlet fever. The epidemic was difficult to control because the disease was difficult to diagnose. Involutionary and abortive forms of the disease were the rule. The same thing has been noted in respect to typhoid fever and pneumonia. This is the result of one of two things or both combined: a low virulence of the infecting organism or a strong resistance in the host. It appears that the same condition exists in regard to epidemic encephalitis, causing the great preponderance of irregular and abortive forms. The early reported cases were not like the present type, and we are observing the unfolding or evolution of a new disease. More cases are missed than are diagnosed. The presence of an epidemic of influenza with subsequent cases exhibiting involvment of the central nervous system is sufficient to arouse suspicion. Isolated cases, however, may tax the diagnostic acumen of any skilled clinician.

Differentiation between polioencephalitis and encephalitis lethargica may be most difficult. If a parkinsonian syndrome should develop, however, the diagnosis would be clear. Again, the tendency to remission would be in favor of encephalitis lethargica. Some time ago we saw three cases of botulism, and do not feel that this differentiation would be difficult. A number of persons having eaten the same food, absence of temperature, the startling suddenness of onset, and the rapidly fatal issue would clear the diagnosis. An examination of the cerebrospinal fluid will diagnose meningitis. Tuberculous meningitis may be confusing until the result of animal inoculation settles the question. Cerebrospinal lues, with its positive Wassermann and colloidal-gold test, should offer little difficulty, and if the two conditions coexist the therapeutic test should be of assistance. That an increase in the sugar content of the spinal fluid is pathognomonic is not agreed by all investigators. Increase in sugar is occasionally found in cerebrospinal lues, poliomyelitis, and meningitis, while in tuberculous meningitis, when well advanced, it is usually reduced.

Treatment

Isolation of influenza patients is impractical, but reasonable care in protecting the uninfected is sound and prudent. William Browning emphasizes the effect of exhaustion and fatigue, and cites a number of private cases to substantiate his argument. These factors play an important rôle in the susceptibility to any acute infection, but it does appear that nervous fatigue may precede and influence susceptibility to encephalitis lethargica.

During a visit to the Mayo Clinic, Rosenow showed some of his results in the transmissibility of the causative agent in epidemic encephalitis lethargica; and Guillain, Alajouanine, and Celice report the case of a man having amyotrophy of the lower limbs with paraplegia following an old acute poliomyelitis, who lay in the ward between two patients with a parkinsonian postencephalitic syndrome. He acquired a lethargic type of this disease. We, however, observed patients in the general ward of the Philadelphia General Hospital who had been there for months and even years, and were led to conclude that transmissibility at that state is rather incidental or doubtful.

Many remedies have been advised in the treatment of the acute stage but their results vary widely, which in itself is sufficient evidence that no one is a specific, or at least is satisfactory. The selection of a very quiet room for the patient, with good ventilation and plenty of sunshine is advisable. As the patient begins to convalesce, light passive massage may be used. Spinal punctures are done in all of these cases for diagnostic data, and where the fluid is found to

be under pressure and improvement results from the procedure, it should be done again in forty-eight to seventy-two hours. There is at present considerable difference of opinion as regards the advisability of this procedure, either for diagnosis or for therapeutic effect. Repeated spinal punctures guardedly performed have, however, been done without apparent ill effects.

Urotropin, the iodids, and sodium salicylate, have their advocates, but are not universally used. When great restlessness or delirium is present, bromids, luminal, or even morphin may be necessary. Hyoscin, which, according to McCowan, Harris, and Mann, is in the nature of a specific in the treatment of the postencephalitic parkinsonian syndrome, may be of distinct value in this stage. Hydrotherapy in the form of an ice cap to the head, colonic irrigations, and hot or cold sponging may be used as indicated. Though free elimination is necessary, depletion with laxatives, especially the salines, should be diligently avoided; they dehydrate. Plenty of fluid and nourishing food not only helps to establish, but also to maintain, when possible, a satisfactory state of bodily resistance. Doyle in 1924, in *California and Western Medicine* mentions the therapeutic agents employed in the treatment of encephalitis lethargica. The multiplicity substantiates our previous statement that an effectual therapeutic agent is yet to be discovered.

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THE PATHOLOGY AND BACTERIOLOGY OF EPIDEMIC ENCEPHALITIS

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Encephalitis lethargica may be an entirely "new" disease, as Flexner[1] is inclined to believe, and it may have no relationship to epidemic influenza, but records of the past are to be discredited only because they fail to reveal the lesions by postmortem examination. The vast amount of work that has been done and still is going on to establish the cause of this disease, while of incalculable value, has not yielded what these early records, after all, needed to convince us. We can hardly demand of them that which even our own more enlightened period cannot supply.

Economo,[2] who first described and named the disease encephalitis lethargica, secured autopsies in the two deaths of seven typical cases, but there were six other cases without the lethargy and general manifestations and of the type of encephalitis pontis which he regarded as probably identical. Relatively slight changes in the cerebrospinal fluid and negative Wassermann tests were deciding observations before death, and were, of course, not available in past epidemics. In this connection it is a peculiar coincidence that Flexner[3], in his single successful recovery of an encephalitis virus, had inoculated a rabbit with cerebrospinal fluid from a man suffering from neurosyphilis but without epidemic encephalitis. Later he demonstrated that this was an ordinary herpes virus.

MORBID ANATOMY

The cerebrospinal fluid may show more or less slight cell increase with some increase of globulin, or no abnormalities, but the Wassermann test is negative. There is nothing distinctive in such findings, yet this examination is more important than any other because it excludes certain other diseases of the central nervous system. In poliomyelitis the alterations in the fluid are apt to be more marked; but in both, polymorphonuclear leukocytes are not uncommon, especially early. Sugar estimations without parallel blood-sugar figures, and even with the latter, are probably of little value.

These characteristics of the cerebrospinal fluid are most easily understood from a study of the disease process. Grossly there is little to be seen in the brain and cord, and there appears to be no fatal lesion in the rest of the body. In severe cases, intense congestion with diffuse reddening and actual small hemorrhagic extravasations as well as small areas of softening have been described. Increase of subarachnoidal fluid, and in severe cases slight clouding of the leptomeninges, as well as rare thrombosis of smaller vessels are vague enough to exclude purulent meningitis; and with a greater congestion of the midbrain on section we have a picture much like human rabies. Both diseases show maximum lesions in the region of the aqueduct and the third and fourth ventricles which it connects. The basal ganglia, cerebral cortex, and gray matter of the cord on section reveal more or less congestion and loss of definition. The cord is conspicuously less involved, and there may be said to be a reversal of the lesions from epidemic poliomyelitis, which is also caused by a different virus.

Microscopically, aside from the marked congestion and possibly some extravasations of

blood, the conspicuous feature, as again in rabies, is the accumulation of thick mantles of lymphocytes in the perivascular spaces of the brain stem and adjoining parts, and to a less extent in the cerebral cortex. The spinal cord shows insignificant infiltration in comparison and no special involvement of the anterior horns. Burrows[4] has emphasized the neuritis he finds in the cranial nerves, which is of interest because of the work of Goodpasture and Teague[5] which indicates that herpes virus reaches the brain along the nerves, and these are also involved in rabies.

Scattered throughout the gray matter, however, in epidemic encephalitis we may see small collections or even diffuse infiltrations of polymorphonuclear leukocytes which are so common in epidemic poliomyelitis, this type of infiltration apparently being most conspicuous in the acute cases, and therefore sometimes not observed (Da Fano[6]). The cerebellum and parts of the cortex and white matter are least affected.

The nerve cells show swelling, vacuolization, chromolysis of various degrees, migration of the nucleus, breaking up of the dendrites and axones, and finally complete disintegration, with neuronophagia. In acute cases the neuronophagia shows polymorphonuclear leukocytes or lymphocytes invading the nerve cells, but sometimes there appears to be simply an increase in number of the normal satellites about the cell. In chronic cases polymorphonuclear leukocytes disappear. Irregular areas of neuroglial cell overgrowth, or gliosis, replace lost nerve cells as in rabies, and correspond to replacement fibrosis in other parts of the body. Spielmeyer[7] does not consider these as microscopic scleroses. They are well depicted by Da Fano and Ingleby[8] in a chronic case in a young child. The meninges show only mild infiltration of lymphocytes.

This pronounced lesion is typical, but from it there may apparently be marked departure in either direction. Cases have been found showing extremely little or no recognizable alterations from the normal, save perhaps congestion and small extravasations of blood, while some seem to pass over into what amounts to a nigh diffuse suppurative encephalitis. The histopathological picture is being broadened continually, and departing in both directions of intensity to such an extent that soon even frankly gross suppurative processes will be recognized as simply maximum expressions of the process, unrecognizable lesions having been fully accepted for the other extreme.

In the common postencephalitic parkinsonian syndrome, McAlpine[9] and a considerable number of other foreign investigators have found in cases of several years' duration very well defined lesions, especially in the substantia nigra. Most of these cases approached or were actually within the age period for cerebral arteriosclerosis, and showed calcification in the anterior portion of the globus pallidus which has been frequently found in acute epidemic encephalitis even in young individuals. It appears that idiopathic paralysis agitans is due to involvement of the globus pallidus, as found by Ramsay Hunt, while postencephalitic parkinsonism is due to degeneration of the substantia nigra which is such a constant picture in acute epidemic encephalitis also.

Transmissibility

The great confusion arising from the attempts to transmit the disease to animals is masterfully presented by Flexner[1]. The rabbit proved most susceptible, but was found also to be most susceptible to a spontaneous encephalitis, and the technic of many workers was not ideal. Some of the inoculations were above reproach, but there appeared another factor in the finding of the transmission of a herpes virus. The use of nasal and buccal washings for inoculations, even though passed through a bacterial filter, afforded an excellent means to transmit herpes virus and to produce herpetic encephalitis in the rabbit; but Flexner and Amoss[3] have recently found complete failure with buccal secretions of healthy persons and rare successful transmission with the same secretion in cases of herpes labialis, though the fluid of the vesicles themselves proves definitely more or less virulent. See Breinl [20].

The recent disquieting reports of encephalitis following vaccination have introduced human vaccinia as a possible cause. Although Kraus and Takaki[10] by cross complement-fixation tests proved the virus is not vaccine virus but encephalitic virus, and vaccine could not be demonstrated in the brains, Turnbull and McIntosh[11] very recently reported seven more cases in which they claim to have demonstrated the vaccinial virus in the human brains, but emphasize marked differences in the histologic pictures from both epidemic encephalitis and epidemic poliomyelitis. Certainly the cases reported by these observers, with the earlier ones of Luksch[12], Stiner[13] and Bastiaanse[14], remind us to vaccinate only the healthy, with a minimum of trauma and measured small doses of perhaps killed vaccine, as suggested by Kraus and Takaki[10].

Wiesner[15] had no trouble in transmitting a pleomorphic streptococcus to a monkey with material from the first cases of Economo.

Bacteriology

That the streptococcus is found in acute diffuse encephalitic processes which go on to for-

mation of multiple small abscess-like lesions has been our experience at autopsy several times. In this connection, it should be recalled that Economo found little nests of polymorphonuclear leukocytes in the lesions. Tilney[15] refers to the clinical resemblance of metastatic abscess.

Therefore, Rosenow may be partly right this time, though a "neurotropic" streptococcus is most remote. The absence of a disease-producing or cultivable organism in purulent conditions caused by it is not very uncommon.

The hasty claims by certain investigators were made without knowledge of the complexity of the problem. Flexner most convincingly analyzed and appraised the situation, and brought forth painstaking experiments to refute them. He showed that the filtrable, cultivable virus, akin to that of poliomyelitis, could not be found, and that animal inoculation for diagnostic purposes was not possible. Recently Stern[17] and Zinsser and Tang[18] have confirmed this work, and the latter, on the other hand, could not obtain Perdrau's[19] recently reported success.

Flexner and Amoss[3], after a study of herpetic viruses from various sources, conclude that while these produce an unquestionable severe encephalitis in certain animals, especially as exhibited by symptoms, they cannot be regarded at the present time as identical with the causative microörganism, if there is one, of human epidemic encephalitis. It is possible that toxins elaborated in the nasopharynx or elsewhere, as in tetanus and botulism, alone produce the brain lesions. This is unlikely, but that the clinical picture may be reproduced by biliary-tract disease is reported by Salzman in ten cases in most of which cholecystectomy brought about a cure.

Relation of Lesions to Clinical Phenomena

Epidemic encephalitis shows a less acutely destructive action on the nerve cells than poliomyelitis, and the prominence of the inflammatory cell sheaths naturally leads to the use of these as criteria determining the site of the greatest lesions microscopically. It remains to be seen whether this cell infiltration actually does serve this purpose. In the main, these lesions correspond with what is seen clinically; the common symptom of ocular palsies and somnolence is readily attributed to the involvement of the midbrain, where we see the infiltration in its greatest intensity and constancy. Nerve-cell degenerations are also seen here, but sometimes are not too outspoken. Many intricate details are involved in the elucidation of the site and manner of action of the incitor. Flexner has observed that although the herpes virus is found in the spinal cord of inoculated rabbits this structure shows usually less marked lesions.

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THE RESIDUALS OF ENCEPHALITIS

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One of the most vexing problems confronting us at the present time is the group of patients suffering from residual disabilities following encephalitis. The clinical course is widely variable, and it is most difficult to classify a great number of the types. In no condition, with the possible exception of poliomyelitis, do we meet with the series of shocking disabilities which occur after encephalitis. The acute manifestations of this disease and the pathologic findings are discussed elsewhere in this symposium, and our review will confine itself solely to a clinical discussion concerning types most commonly known.

We would in such groups consider the parkinsonian, the hemiplegic, the convulsive, the obese, the narcoleptic, the psychotic, and the cranial-nerve-palsy types.

Multiple sclerosis is not a sequel to encephalitis lethargica. The clinical manifestations of this disease in its classic form are vastly different from those found in encephalitis. While it is true that certain patches of scarring bear a resemblance to the types found in insular sclerosis, we must regard this disease as a different problem.

The belief that the spinal cord is not affected in the encephalitic process is an error, for in our experience a number of cases of diffuse myelitis have been observed. These cases have a tendency to recover, and in most instances with little disability. There has been no other assignable cause for the process, and the clinical picture differs from other varieties of myelitis. We have been forced to include these cases in this group. Deterioration in the spinal cord and characteristic changes have been found at nec-

ropsy. The term "encephalomyelitis" may well be used.

Of all the cases included among encephalitic residuals, the parkinsonian types are in greatest number. In the young, this syndrome frequently appears early, but characteristically in the adult it develops months after recovery from the acute disease. It assumes the picture of a progressive degeneration, but in some cases an arrest or incomplete remission occurs. Some have contended that the toxin persists within the nervous system and continues to produce the degeneration. Some have recommended that the encephalitic residual be quarantined, but we have seen no case in which we believe contagion could have occurred after the acute process subsided, and we cannot subscribe to this theory.

The classic Parkinson's disease presents rigidity, tremor, a masklike expression, and gait disturbance. The tremor which occurs in postencephalitics is not uniform, and a volume can scarcely describe the various types which we see complicating the other signs of Parkinson's disease. We have seen choreal and choreo-athetoid movements accompanying rigidity and gait disturbance, and a great number of similar combinations where there is a definite history of "sleeping sickness." The rigidity is not always present, and gait disturbances are not common except in the state of extreme development. Unilateral disturbance is not uncommon, and many cases have such an onset; but in the majority, careful search reveals beginning signs on the other side.

Truly, they show mild disturbance of gait, but propulsion and true festination are not common. Some have included torsion spasms and rarer types of tremors among residuals. The slowness of movement with intact strength which has been called bradykinesia is probably the outstanding motor symptom. A careful study of this group with later necropsy examination should surely give clearer insight into the function of the extrapyramidal system. At the present time the various hypotheses as to the mechanism and neurophysiology producing these states are largely conjectural, notwithstanding the very excellent work in the last decade.

The hemiplegic type usually develops during the acute phase of the disease, and is characterized principally by its failure to show a tendency to recover function. There is little to distinguish it clinically except the history. This pyramidal involvment is an exception to the usual site of lesion, and the spasticity must be differentiated from the rigidity noted in the extrapyramidal types. Here we have actual paralysis, while in the parkinsonian types there is little strength impairment but simply the bradykinetic phenomenon, so often mistaken for muscular weakness.

Not a few patients who show no primary or secondary motor involvement suffer epileptiform phenomena. We have seen some cases of petit mal, some jacksonian seizures, and some general convulsions. In the jacksonian types, muscular paresis has persisted after the attack. In two cases, paralysis generally succeeded the paresis. We have regarded these cases, of course, as progressive focal lesions. Under luminal administrations we have succeeded in bringing about a cessation of attacks in the majority of cases. In some, it lessens the frequency and number of attacks.

The curious fat increase, with the distribution similar to that seen in pituitary dyscrasias, has been noted. This condition has most frequently succeeded the acute febrile stage very closely, and has shown a coincident mental change. The study of the pituitary gland by several observers has been of extreme interest. In several cases in girls about the age of puberty, the weight increase has been most striking. I have seen a weight increase of sixty pounds within a period of six weeks. We administered pituitary substance, with but little success. While the weight increase apparently ceased, there has been no tendency to a return to normal fat distribution.

The phenomenon of narcolepsy as an encephalitic sequel is one of extreme interest. The cases we have seen of uncontrollable attacks of sleepiness and attacks of laughter without emotional stimulus have shown a history of mild attacks of encephalitis. They have been unassociated with any definite signs of organic involvement. The appearance of these individuals has led us to study them from the endocrinologic viewpoint, with no conclusive findings. There has been a tendency for our patients to grow worse in spite of treatment.

The mental disturbances, of course, will be discussed with exclusion of the postfebrile deliria and the amentia syndrome which we have observed in those cases with prolonged fever and exhaustion, since nothing characteristic presents itself. In children, we have seen a most striking behavior change. There is an apparent arrest in some, with a definite obtunding of the faculties and inability to keep pace with education. Quite a few children become refractory, incorrigible, even vicious. In the adult, actual dementia is uncommon, but personality changes and regression are noted frequently. Some patients exhibit depression even to the point of suicide, while others have shown a hypomanic state. There is a slowness of mentation in a part of the group which has been styled as bradyphrenia, and this

is an excellent term, for it seems to describe the mental state accurately. We are, of course, mindful of the fact that an acute process such as this frequently produces a recurrence of a previously existing psychosis or activates a latent mental disturbance. There is little characteristic about these cases. In those exhibiting motor disturbances, the mental reactions are frequently similar to the cases in which there is an actual psychosis, but in this group we have excluded from consideration cases which show any demonstrable organic disease.

Vasomotor and secretory disturbances present themselves in various ways. Seborrhea is not uncommon, and dense deposits of dandruff are found on the scalp, in the eyebrows, and in the pubic hair. This is a very annoying condition. Sialorrhea or intense salivation is often a distressing symptom. It is obstinate, and resists treatment. Intense diaphoresis also occurs to a distressing degree, and this intense sweating, principally from the palms of the hands, the axillæ, and the feet, has been seen in such a degree as to be a disabling condition. The vasomotor changes, such as flushing, and on the other hand, angiospastic phenomona with coldness of the extremities, are annoying symptoms. These are not uncommon, and are often found in combination with motor disturbances, though they may be the only symptom or may occur complicating secretory changes.

The so-called respiratory tic, exhibiting periods of apnea and tachypnea with characteristic attitudes, are of a great deal of interest. They are uncommon, but most distressing and disabling when they occur. To the present moment, these conditions are virtually irremediable.

Cranial-nerve palsies are not an uncommon residual, and deafness, disturbances of vision, and facial weakness have been noted. Some cases of trigeminal neuralgia have been attributed to encephalitis. There is nothing characteristic in the physical findings, and the prognosis is not good.

A large group of mild and severe types of neuroses might be discussed, but we have attempted to touch only upon those more important symptom complexes which are directly attributable to encephalitis as an organic disease.

SUMMARY

1. The galaxy of motor dysfunction presenting itself in the postencephalitic patient stimulates us to examine in detail these phenomena, so that further studies of the tissues may give a clearer insight into the function of certain ill-understood portions of the nervous system.

2. The severity of acute febrile processes bears little relation to the intensity of the residual disease process.

3. The interval of apparent good health occurring between the acute phase and the beginning of the degenerative symptoms has no clear explanation, and at present is controversially discussed.

4. Poliomyelitis and polioencephalomyelitis usually present a most serious disturbance at the time of the acute process, and have a tendency toward betterment. This is not true of encephalitis.

5. The principal symptom in the parkinsonian group is bradykinesia. There are a number of the tremor types complicating otherwise classic signs of paralysis agitans, but the unmodified Parkinson tremor is the exception.

6. The mental changes are usually those of regression. Bradyphrenia, or slow mentation, is an outstanding symptom although other psychotic manifestations may be present. It may be a reactivated previous psychosis. The behavior change in children with even mental retardation or arrest gives cause for concern.

7. The administration of hyoscin renders a certain percentage of patients more comfortable. The entire problem is one in which the tragic side of this condition is constantly in the foreground. Our assistance to those patients is in reality largely spiritual.

ABSTRACT OF DISCUSSION

On A Critical Review of Encephalitis

MAX H. WEINBERG, M.D. (Pittsburgh, Pa.): Many encephalitis patients complain particularly of a distressing pain in the head, sometimes in the arms, and back of the ears. I have known of several patients who were operated upon for mastoiditis and who later proved to be suffering from encephalitis. Seborrhea, particularly around the mouth and nose, is a very common symptom. There are many and varied symptoms, and it is best to look upon the disease as affecting the cerebrospinal axis and to realize that any set of symptoms may occur.

In differentiating from poliomyelitis it must be remembered that the paralysis, as a rule, does not appear promptly. Encephalitic paralysis migrates. It may start on one side of the face, involving the other the next day, and eventually affecting many parts, because it is apt to travel all over the cerebrospinal axis. There is usually no difficulty in differentiating it from other forms of paralysis.

Encephalitis sometimes strikes a patient suddenly. There may be complete coma, cyanosis, and vomiting. In Mt. Sinai Hospital, New York, one case of encephalitis was first suspected of being melanosarcoma. Many authorities in Europe are connecting herpes with encephalitis, and workers here and abroad have confirmed the findings of Straus that it is due to a filtrable virus which invades the nervous system.

Sixty to sixty-five per cent of the cases of encephalitis develop the parkinsonian syndrome, many of them after apparent recovery. In one instance the patient seemed well for three years, after recovering from his

illness in three weeks, and then developed the syndrome. He had the peculiar symptom of inability to keep his eyes open when on the street, but in the house could open them well. He also had micrographia. His writing became smaller and smaller, so that finally it could hardly be read.

WALTER FREEMAN, M.D. (Washington, D. C.): In regard to the etiology of encephalitis, physicians the world over take three stands: von Wiesner, Rosenow, Ottolenghi, and others believe that a pleomorphic streptococcus is the cause. Levaditi and Harvier, Perdrau, and others in France think it is due to a virus. Others, especially in this country, say they do not know. Under such conditions it may help to give my personal experiences.

I have had the good fortune to work with Miss Evans, of the Hygienic Laboratory, U. S. P. H. S., in Washington. In three cases of the acute disease and in two of the acute recurring type we have isolated an organism from the blood stream during life. This organism tallies very closely with that described by von Wiesner and by Rosenow. We have obtained the same organism from the brain in four, possibly five, fatal cases, and also from the heart's blood in two cases at necropsy. We have obtained it from the spinal fluid in one acute case and two chronic ones.

This organism grows much like the Streptococcus viridans. It has certain small forms that are filtrable, and these will grow to visible size on cultivation. Those who believe in the fixed types of bacteria cannot explain this growth of cultures from filtrates. They think the cultures are contaminated, but we believe there are certain small forms which can pass through the filter and later develop into larger visible organisms. When these organisms are injected intravenously into animals—rabbits and monkeys particularly—they tend to localize in the brain. Injections into the brain are practically always fatal in less than twenty-four hours. The inoculations are followed by symptoms somewhat resembling encephalitis in man. Hypertonicity, excitability, convulsions, often somnolence, fixed postures of the head, and other symptoms are characteristic. These have been shown by Rosenow even better than by us. On culture from these animals the same organism is grown, and it can be transmitted from animal to animal, always with similar results. Examination of the brains of these animals shows acute meningo-encephalitis. We believe, therefore, that this organism is the specific cause of the encephalitis.

ALBERT J. BRUECKEN, M.D. (in closing): Our material has shown the same streptococcus as that described by Dr. Freeman, but in cases that were early of a suppurative nature. The great difficulty is the frequency of the occurrence of this organism in any kind of lesion due to some other organism. This streptococcus is frequently a secondary invader, and we must be very careful in drawing conclusions with regard to it. It will produce a meningo-encephalitis when introduced into the cranium, as will many other pyogenic organisms, but this does not prove it to be the cause of encephalitis lethargica. We have never seen any green streptococci produce the epidemic form of the disease, though the Streptococcus hemolyticus sometimes produces epidemics—consider its relation to scarlet fever, etc. The green streptococcus is not a pus producer.

Rabbits frequently show spontaneous encephalitis, and this may be the background for the growth of this organism on injection. It was claimed that this disease could be diagnosed by injection into a rabbit, but the work of others as well as our own has disproved this. If an enormous number of green streptococci are injected, of course this will produce a disturbance in the rabbit's head, but our cases so produced were not typical encephalitis. I believe the streptococcus is probably not the cause of this epidemic disease.

WILLIAM H. MAYER, M.D. (in closing): Seborrhea appears in other acute illnesses as well as in encephalitis. The persistence of this phenomenon into the chronic stage, so that it is a complication which causes considerable concern, is in line with my remarks concerning the merging of acute and chronic symptoms. It really is most difficult to segregate or classify this group into distinctive types.

Case Reports*

SPHENOPALATINE-GANGLION TREATMENT OF CERTAIN NOSE CONDITIONS

Demonstrating a New Needle for Injecting this Ganglion

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Sluder introduced a wonderfully interesting means of relieving suffering by treating the sphenopalatine ganglion. He showed that this great nerve center can easily be subdued by cocainizing the overlying nasal mucosa or by injecting the ganglion. To inject, he employed a large straight needle, introduced through the posterior tip of the middle turbinate, and entering the sphenomaxillary fossa through the sphenopalatine foramen. Later, Ruskin used the posterior palatine canal to inject, inserting a straight needle attached to the crooked tip of a syringe up through this passageway until the ganglion was reached from beneath.

I found that a straight needle will not always pass clear up to the fossa where the ganglion lies because of the natural curvature of the passageway, as detailed in the July *Laryngoscope,* in which appears a description of a curved needle I designed and an explanation of the technic of introducing this needle, as follows:

Place a straight tongue blade on the lower incisors as a fulcrum, the distal end pressed forward against the back of the hard palate on the side to be injected. At approximately a half-inch anterior to the posterior margin of the hard palate, rather close to the alveolar process, is the opening into the posterior palatine canal. Touch the mucosa with tincture of iodin. Holding the syringe up against the upper outer incisor of the opposite side, introduce the needle, depressing the syringe as the needle is pushed into the canal; that is, as the needle enters, the barrel of the

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syringe is depressed and usually swung toward the side injected. An occasional patient has a canal so narrow as to make much maneuvering necessary. The syringe should then be held across the mouth, as far as to the opposite upper molars, in order to get the needle past the isthmus, after which the barrel of the syringe should be swung back to the center so as to prevent the point of the needle from entering the nasal cavity through the sphenopalatine foramen. The needle should be inserted 4 to 4.5 centimeters, as Ruskin has stated. It is well to have a solder mark on the needle at this distance, but many times the needle encounters the roof of the fossa when the injection is made. The curved needle is not liable to pass up through the sphenomaxillary fissure into the orbit, as can easily happen with a straight needle.

The rhinologist meets more cases needing cocainizing than injecting. Sluder originally directed that a swab be held below and then above the posterior tip of the middle turbinate to cocainize. Of proper size, on a properly bent applicator, the cocain-saturated swab may be so placed as to be self-retaining, thus avoiding the fatigue from holding the swab in one place for five minutes, and at the same time permitting prolonged application over the ganglion.

Following are brief reports of some vasomotor cases in which this therapy was used:

CASE 1: A man aged 35 was referred by the ophthalmologist for correction of any nasal cause of dacryocystitis. I found the patient with marked epiphora, the nose greatly obstructed by a swollen, boggy mucosa with profuse mucous secretion. This condition had existed for eight years. I found no sinus infection. Both sphenopalatine ganglia were cocainized. Five days later the patient returned reporting remarkable improvement, and examination showed very little epiphora and an entirely changed nasal mucosa. For moderate continuance of symptoms, four subsequent treatments were given during the following three months, and on January 21, 1926, I injected the ganglia. Relief was practically complete.

CASE 2: A man aged 40 had been kicked on the nose by a horse fifteen years ago. Since then, the left side of the nose had been obstructed, more especially during the past seven months. He sneezed probably fifty times a day, and used six handkerchiefs daily for the mucous discharge. His sleep was much interfered with by the blocked-up nose. Examination showed a right septal ridge, no pus, generally swollen mucosa, and hypertrophy of the margins of the inferior turbinates. The antral washings were clean. Submucous resection was done in August, 1926. The septal flaps remained very thick, obstructing the nose. Two weeks later both sphenopalatine ganglia were cocainized, and the patient was instructed to return on the third or fourth day for another treatment if he did not have much relief. He did not appear until nineteen days later, when he reported that he now sneezed about six times daily, and had no nasal obstruction, even at night. The mucosa was free from bogginess, swelling, and oversecretion.

CASE 3: A man aged 35 was a hay-fever sufferer who had spent the season at a New England resort where he was entirely free from symptoms. The day after returning to Bethlehem he had moderately severe pollen symptoms. I cocainized the sphenopalatine ganglia, and he was so relieved that he did not require further treatment.

CASE 4: A man aged 36 was a regular sufferer of the ragweed-pollen type, which was sometimes associated with asthma. In 1925 I gave him nine treatments, two a week, cocainizing the sphenopalatine ganglia. During the pollen season in 1926 I employed Phillips's intradermal injections of the pollen extract, with nearly complete relief. He lives in a locality of much ragweed, and had mild morning symptoms but no headache or asthma, and infinitely fewer symptoms until near the end of the season, when he failed to report as often as he should have. He then wished to have a ganglion treatment, as he seemed to think the last dose of pollen extract had not been very helpful, although I had given him a very large dose. One ganglion treatment relieved him, and he needed no further attention that season.

Treating the ganglion during painful sinus and ear conditions will often greatly relieve the suffering while standard methods are followed for the cure of these diseases. It is no small matter to be able to effect almost instantaneous relief of the really severe pain during the early stage of such conditions, and the grateful patient will bless the specialist who practices the procedure when indicated.

DOUBLE MASTOIDITIS WITH LATERAL-SINUS THROMBOSIS FOLLOWING SCARLET FEVER

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E. P., aged 5, apparently had been healthy until seven weeks before the illness described herein. At this time she had a virulent attack of scarlet fever which held her bedfast for four weeks. Her physician gave little hope for her recovery. A week after leaving her bed she developed an infection of the right thumb and the lips, and suppuration of both ears. Four days later the discharge from the ears ceased. A decided swelling with pain occurred over both mastoids. I was called December 21, 1925, and found a large subperiosteal abscess over the left mastoid, and swelling, redness, and pain over the right. Both ear canals were filled with heavy, blood-stained, stringy pus. The temperature was 100°, pulse 120, and respiration 20. The patient appeared very sick. A double mastoid operation was decided upon and performed.

Both ear drums were incised. Findings in the left mastoid were: free pus beneath the periosteum, destruction of the cortex of the mastoid tip, and necrosis of the entire tip. The mastoid

antrum was reached with difficulty because of the density of the bone. The diagnosis was chronic mastoiditis with acute exacerbation. In the right mastoid there was some pus beneath the periosteum. Drainage was made through the cortex. There was very little pus in the antrum or mastoid cells. The wounds were irrigated with hot normal saline solution, and packed with 2-per-cent mercurochrome, dressed, and bandaged.

The laboratory report showed the infecting organ to be the Streptococcus hemolyticus. The leukocyte count was 19,800, and the urine negative.

The patient remained in fairly good condition up to the sixth day, when she had a decided drop in temperature and then as decided a rise. A provisional diagnosis of lateral-sinus thrombosis was made, but with no certainty as to the side. In consultation with Dr. John F. Culp, it was decided that she was in no condition for exploratory surgery, or for a spinal test.

At the same time the child developed a dry hacking cough for which I called Dr. J. B. McAlister in consultation, to determine the state of the lungs and heart, which he found negative. I requested that Dr. McAlister remain on the case with me for his clinical advice. When multiple abscesses developed, we called in Dr. Norman B. Shepler, who also remained on the case for the general surgical treatment and blood transfusion. It was necessary for him to incise and treat an abscess of the shoulder, of the hip, at the tip of the spine, and on the thigh.

From the 27th, the patient had irregular periods of chills, fever, and sweating. Her appetite varied, but showed a slight improvement with each stage of a few days. Her general condition varied from day to day, but in periods of a few days showed improvement. The mastoid wounds showed no tendency toward granulation until about two weeks before her subsequent relapse. The medical treatment given was tincture of nux vomica, five minims every eight hours, until January 23d, when she was given liquor arseni et hydrargyri iodidi, one minim three times a day. Mild sedatives, laxatives, and enemas were given as needed.

Following is a synopsis of the treatment and abridged notes by the nurse, resident, and myself: On December 21st the leukocyte count was 19,800. On the 24th pain developed in the left ankle. On the 25th the sutures sloughed out on both sides. On the 27th the patient was fretful, irritable, twitching, biting her lips, coughing, and suffering pain in one knee. The temperature dropped to 97.3° but immediately rose to 106.1°. On the 28th the leukocyte count was 8,950. A blood culture showed the presence of the Streptococcus hemolyticus, but the general condition was improved. On the 30th the thumb was healing. The general condition was the same, and the patient was indifferent to her surroundings. December 31st the leukocytes numbered 8,450, the red blood corpuscles 1,880,000; the hemoglobin was 40 per cent, and the polynuclears 82 per cent. The patient was given 8 c.c. of a 1-per-cent solution of mercurochrome intravenously at 4:30 p. m., and 2.5 c.c. at 11:30 p. m., with no reaction except elevation of temperature. She complained of pain in the right side of the neck.

On January 1st she was much brighter. Eight c.c. of a 1-per-cent solution of mercurochrome was administered intravenously at 4:30 p. m. with no reaction. January 2d the blood culture was positive for Streptococcus hemolyticus. On the 3d the leukocyte count was 6,550; on the 4th, 5,750. Injection of 10 c.c. of sterile milk was followed by a severe reaction. The patient was noisy, restless, and had pain in the legs. On the 5th the leukocyte count was 7,200. Injection of 10 c.c. of sterile milk induced a moderate reaction. The patient had a comfortable day.

January 6th the leukocyte count was 5,360. At 10:30 p. m. blood transfusion was performed, and 240 c.c. of blood, 30 c.c. of sodium citrate, and 50 c.c. of normal salt solution was injected. The patient had been without color and her lips chalky white before transfusion. On the 7th her lips were pink with fairly good color to the skin and beneath the finger nails. She was resting comfortably. The pulse was stronger. As a result of the transfusion the left arm was discolored. The leukocyte count on the 8th was 5,375. The patient was brighter than usual on the 9th, but an abscess had developed at the tip of the spine. On the 12th she seemed brighter in every way. On the 13th she had improved, but phlebitis had developed in the left thigh. January 15th the blood count was: leukocytes 10,600, red blood corpuscles 2,110,000, hemoglobin 45 per cent, polynuclears 74 per cent. Her appetite was better, but the right hip was painful. Her general condition was improved on the 18th. She slept much better than previously. The blood culture was sterile. On the 21st there was a localized abscess in the right supraclavicular region. The patient was quite bright, with a good appetite on the 24th, and was discharged from the hospital on the 27th much improved.

Her mother stated that on the 29th she ate heartily, her general condition was improved, and she was brighter and conversed jokingly. February 5th her hands and feet were cold. There was a peculiar appearance of the eyes,

grinding of the teeth, vomiting, and lack of appetite. On the 7th she was semicomatose, with cold arms and legs, indifferent to her surroundings, and growing weaker. She died at 5 p. m.

Dr. Shepler and I saw the patient at 10 a. m., when he detected an irregular heart with weakened heart sounds. The diagnosis was endocarditis with embolism. Up to this time there had been no clinical evidence of endocarditis. The mother told me that several days before, she gave the child a meal of fried bananas and a sirupy chocolate milk drink made up at the drug store. The following day the patient seemed worse, vomited, and had loss of appetite.

Three questions are suggested: (1) Did the indiscreet diet cause indigestion and thereby overtax an already weakened heart? (2) Did the withdrawal of the tincture of nux vomica leave the heart to function without stimulation before it was able? (3) Were the heart muscles so toxic from the virulent scarlet fever and mastoiditis with pyemia that they could not recover?

CARCINOMA OF THE TONSIL

WALTER E. BROWN, M.D.
PITTSBURGH, PA.

Primary carcinoma of the tonsil is a rare condition. Secondary involvement is more frequently seen.

Mrs. A. L. F., aged 60 years, was referred by the late Dr. D. La Cossitt on April 10, 1923.

Her father had died of apoplexy at the age of 89, and her mother of apoplexy at 75. There was no history of carcinoma, tuberculosis, or syphilis.

The patient had borne six children, three of whom were living and well. The other three had died of diphtheria and whooping cough. She had had the usual diseases of childhood, and influenza and pneumonia in 1918. Since early life she had had frequent attacks of quinsy, always limited to the left side.

A year before I saw her, she had noticed on the left tonsil a small tumor, which had been increasing rapidly in size for four months. She was anemic and emaciated, and there was a reddish-colored nodular tumor, ulcerated in the center, situated on the left tonsil. There was no enlargement of the adjacent lymph glands. No infiltration of the peritonsillar tissues could be demonstrated by using the diagnostic suction tube and drawing the tonsil forward. The tonsil was freely movable, and the pillars were not involved.

The age of the patient; the history of a tumor, small at first and continuing so for months, but later taking on rapid growth; the character of the tumor, which would fit any textbook description; and the general anemia and emaciation—all led to a diagnosis of carcinoma. Unfortunately, too many cases are far advanced when first seen by the physician, and are inoperable. But here was a case which, as nearly as could be determined, was localized in the tonsil. It appeared to be a surgical case, and it was thought that enucleation of the tonsils, followed by x-ray treatment, would be the proper procedure. If there had been any evidence of infiltration or glandular enlargement, we should have considered the more radical operation of von Langenbeck by the external route, or if the involvement had been too extensive for this and the case inoperable, the employment of radium or the x-ray would have been recommended.

The patient was admitted to the Homestead Hospital, and was operated upon the day following her examination. Local anesthesia was employed. The tonsil was grasped above and below the tumor, and drawn forward so that dissection could be made as far from the growth as possible. Dissection was easily accomplished, and there was no evidence of carcinomatous infiltration of the capsule. The operation was completed by a snare. The right tonsil showed evidence of infection, and was also removed. Recovery was uneventful. The advice to have postoperative x-ray treatments was not followed.

Dr. E. W. Willetts, of Pittsburgh, submitted the following pathologic report: "The specimen shows epidermoid carcinoma of the tonsil. The growth is very



Carcinoma of the tonsil.

typical and quite extensive. Large masses of cancer tissue are seen in nearly all parts of sections. Deep invasion of the tonsil has taken place. There are no definite cancer pearls, but there are a few just beginning. In some areas the growth has a papillomatous appearance. The cell changes are quite marked and typical of cancer."

After the operation, the patient gained twenty-four pounds in weight, and has had continuous good health. She is approaching her 64th birthday. Near the base of the tongue is what appears to be a small mass of granulation tissue. Against the chances of this being a recurrence of malignancy are the following facts: Three and a half years have passed since the operation. There has been no increase in size, no infiltration, no glandular enlargement, no ulceration, hemorrhage, or pain. There have not been any subjective throat symptoms. Nevertheless, this tissue will be kept under observation.

The writer feels that in this case surgery was the proper treatment. Lenormant, of Paris, states that prolonged survival after surgical ablation of a carcinoma of the tonsil is rare. He

reported a case in which relapse occurred two years and seven months after operation. Sir St. Clair Thompson mentions cases which have been operated on, with no recurrence six years after operation. In the majority of cases, however, death occurs within two years. An inoperable subject whom the writer saw in 1924 died within a year and a half. This was a younger patient, aged 48, and in younger persons the growth is usually more rapid.

It seems very probable that in the case reported above, the frequent attacks of quinsy, or acute exacerbations of a chronically infected tonsil, caused the growth, which was first benign and later malignant. Other examples of the apparent effect of chronic irritation are numerous.

In cases in which the diagnosis seems reasonably certain, precious time should not be lost in making tests which are scientific and interesting but unnecessary. Of course, in most instances a Wassermann should be done. Biopsies are sometimes dangerous and not always conclusive, because the section may not include the growth. In another case of primary carcinoma of the right tonsil in a patient aged 64, some one performed a biopsy a year ago. The case is now inoperable, and is being treated by radium. The tonsil is enlarged, the tissues infiltrated extensively, and there is marked glandular enlargement, and severe pain in the throat and ear. The tonsil was suspicious a year ago, and at that time was probably operable. Emphasis should be placed on prompt surgery before extension of the growth, and gentle manipulation of the tissues. The public should be educated to consult a physician early regarding suspicious lesions.

ACUTE MASTOIDITIS WITHOUT APPARENT AFFECTION OF THE MIDDLE EAR

WILLIAM HARDIN SEARS, M.D.
HUNTINGDON, PA.

W. L., a white male of American parentage, aged 8 years, was admitted to Blair Memorial Hospital January 6, 1922.

He had had measles, mumps, whooping cough, and chickenpox in early childhood, influenza during the epidemic of 1918, but no other serious illness and no operations except tonsillectomy and adenectomy two years before this illness, nor had he had any prior affection of the ear.

The latter part of November he had a mild attack of influenza with inflammatory symptoms of the upper respiratory tract. Three weeks later, marked enlargement of the right posterior cervical glands was noted. This was accompanied by pain in the left mastoid region. For this he was seen once or twice by the attending physician of the institution. Eleven days before admission, while playing, he was struck with some force over the region of the right mastoid. At this time a small swelling was observed at the same point. This gradually but progressively increased in size. The patient stated that he had had but little spontaneous pain, although the part was sensitive to touch, and pain was induced by pressure. He had had no soreness or pain in the throat, either spontaneous or induced by swallowing. There had been no pain in the ear, except that noted in association with the cervical adenitis, which persisted for a few days, and there was no sense of impaired hearing on that side.

For the past three weeks his appetite had been good, digestion normal, and bowels regular. He slept and rested well at night. He had had no nervous symptoms, had been as full of pep as usual at play, and had attended school regularly. January 5th the institutional physician, noting swelling over the mastoid and protrusion of the right auricle, referred him to the service of the writer at the Blair Memorial Hospital.

His temperature on admission was 99°, pulse 80, and respiration 20. Examination showed a well-nourished, bright-faced boy of good size for his age. His color was good and he looked well.

Nose: Septum relatively straight. Turbinate bones normal in appearance. Free space for nasal breathing. No purulent secretion seen, nor any evidence of disease of the nasal sinuses. Transillumination and roentgenograms of the nasal sinuses were negative.

Mouth: Teeth well cared for and in good condition. Tongue coated but moist. Buccal mucous membrane of good color. Tonsils and adenoids had been removed.

Ears: Left ear—the auricle, external canal, and middle ear were negative. Right ear—the auricle protruded from the side of the head, the external canal was but slightly, if at all, narrowed compared with the left. The otoscopic picture in no way varied from the unaffected ear. Landmarks were clearly seen, and there was normal brilliancy and transparency of the tympanic membrane; cone of light unbroken. Membrane and ossicles were easily mobile with the pneumatic otoscope. Over the mastoid there was a large swelling which extended upward two inches above the superior attachment of the auricle, backward almost to the occipital protuberance, forward into the temporal fossa, and below and back of the mastoid about an inch. Movement of the auricle was not painful. Pres-

sure over the swelling and at its borders induced pain. Palpation indicated fluid in the depths of the swelling. The postcervical glands showed some enlargement, but were not broken down. Hearing in both ears was good for conversational voice and whisper, as well as high and low tones of tuning forks. Weber indifferent.

Urinalysis: Specific gravity 1.005. Albumin and sugar, none. Acetone absent. No casts.

Blood: Differential white cell count, 9,500, 67 per cent polynuclears.

Roentgenograms of the left mastoid showed a well-pneumatized structure of mixed cells. Those in the antral region were rather small, but in the posterior part of the process the cells were of moderate size, while those of the tip were larger. The right mastoid was somewhat hazy, but evidence of intercellular destruction of bone could be seen. The sinus lay fairly well back on both sides.

At 9 a. m., January 8th, the patient was operated on under ether narcosis. A curvilinear incision was made from the tip of the mastoid, to just above the upper attachment of the auricle. The tissues were deeply infiltrated and thickened, and a large abscess cavity was penetrated about midway of the incision. The central cavity of the abscess showed sloughing of the muscle tissue and of the underlying periosteum. A quantity of pus approximating one to one and half ounces was drained. After elevating the periosteum over the mastoid, the bone was inspected, and an area of necrosis about six mm. in diameter was noted in the cortex about two and half cm. above the tip. This opening was filled with granulation tissue.

There was a large amount of cell destruction throughout the mastoid process, and granulation tissue was every place in evidence, with but a small amount of pus. The sinus plate was necrosed for two cm. in length and one cm. in breadth. Granulation tissue was present in this region, but was not attached to the wall of the sinus. The sinus was fairly normal in appearance, was resilient, and did not pit on pressure. It has already been noted that pus in the mastoid itself was present in very small quantity.

The organism isolated from the pus was a streptococcus. Unfortunately, this was not typed, so that one of the essential points of the case is not on record.

Owing to the great swelling of the soft tissues, the wound was left open with the exception of a single stitch at its lower end, was packed lightly with iodoform gauze, and the usual gauze dressing and bandage applied. The patient made an uneventful recovery except that the wound was rather slow in final healing.

RAT-BITE FEVER*

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The Japanese call this condition, caused by the bite of a rat, with a consequent invasion of the human system by the Spirochæta morsus muris, Sodoku. It is claimed that it may also be produced by the bite of a cat, dog, ferret, weasel, or squirrel.

The patient was a female infant, 14 months old, whose chief complaint was fever and drowsiness. Her illness began with two minor attacks of vomiting during a 24-hour period. There was no particular evidence of pain except a continual whining. The temperature ran around 101° to 103°; pulse 140 to 150; respirations, about 30 per minute.

I saw the patient on Thursday, March 15th. She was acutely ill. A few cervical glands on the left side were pea to lima-bean sized. There was a small mark on the tip of the right index finger which I was told was a burn scar and it looked it. I ordered a fever mixture, and normal-saline enema, with light, mostly liquid, diet.

Saturday night, March 17th, the father reported the child no better. I questioned anew, and he said that perhaps he ought to mention the fact that the child had been bitten by a white rat on the tip of the left index finger on the Monday before, March 12th. This at once suggested a diagnosis. I gave him a laxative for the child, and visited her the next day, March 18th. I now observed the rat tooth mark on the tip of the left index finger. It was so very small that it looked like the merest needle prick.

A most unusual rash had developed. There was practically nothing posteriorly from the head to the knees; but anteriorly, over the chest and forearms, a rash quite typical of measles was found. This rash soon assumed a strange, dusky-red, turgescent appearance. The anterior surface of the thighs was covered sparsely, and the entire surface of the legs from the top of the knees downward was covered profusely with a scarlet punctate rash that looked exactly like scarlet fever.

The left axillary nodes became enlarged and tender. The baby now became hyperesthetic, and was very restless day and night. A blood culture was negative, as were a blood smear and a specimen of fresh blood, for pathogenic and pyogenic organisms and for the Spirochæta morsus muris. The hemoglobin was 80 per cent; W. B. C. 10,400; R. B. C. 4,150,000. The blood Wassermann was negative. A voided specimen of urine showed a trace of albumin and a small amount of acetone, likely due to tissue waste and temperature, since a microscopic examination was negative. A catheterized specimen was also negative.

The site of the bite began to show slight dusky discoloration and some edema on March 20th. Five centigrams of sulpharsphenamin were injected intramuscularly at this time. Next day the temperature began to subside, the swelling about the bite began to reduce, and the exanthem to fade. The child's general condition showed slow but definite improvement daily, with the fever, restlessness, and nervous manifestations growing less and less. She was very weak, however, for some three weeks, and had to learn to creep, as

*Read before the Section on Pediatrics of the Medical Society of the State of Pennsylvania, Philadelphia Session, October 14, 1926.

well as to walk again. Her appetite improved progressively.

Treatment, aside from the arsenic, was purely symptomatic. Tepid sponging, with small doses of acteylsalicylic acid, were used for the fever and apparent pain and tenderness. Fluids were pushed, though at first this was difficult, for the child refused everything by mouth. The condition did not progress far enough to necessitate parenteral fluids.

The baby is now twenty-one months old, and apparently well except for a slight limp or weakness at the right hip.

The incubation period was rather short, but this child was very young and poorly nourished when taken sick.

One small dose of the arsenic seemed to cure, which is rather presumptive therapeutic evidence, since few if any diseases are so influenced, aside from rat-bite fever; but, again, this patient was only an infant.

The anemia very often found in these cases was not present in this instance, due, we hope, to the rather early specific therapy.

We are wondering now, of course, whether or not we should have found the spirochete if we had made a dark-field examination of the serum expressed from a sterile needle-puncture when the finger showed discoloration and swelling.

While no diplococcus, spirillum, nor streptothrix was found, due perhaps to our desire to help the child as quickly as possible, thus sacrificing sufficient study of the case, it is felt that the history, together with the clinical picture, and the rapid response to the sulpharsphenamin therapy, is justification for a diagnosis of rat-bite fever.

825 Highland Building.

AN UNUSUAL CASE OF APPENDICITIS IN A CHILD

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On a Sunday afternoon I was called to see a six-year-old girl who had been taken ill suddenly the afternoon before with vomiting and abdominal pain, which continued and grew worse. The child had always been considered a normal, healthy girl. There had been no evidence of digestive disturbance, and she never had complained of any abdominal pain.

Examination revealed slight rigidity of the muscles of the right side and marked rigidity of the muscles of the left side, with the greatest tenderness two inches below what would correspond with McBurney's point on the opposite side. On introducing the index finger into the rectum, the tip of the finger touched a very tender spot.

The temperature was 100⅘°. There was a leukocyte count of 16,400, and the child gave every evidence of typical appendicitis, except for the tenderness being on the left side.

Seventy-two hours after the initial symptoms appeared, all the evidence was present which would be found following a ruptured appendix. When the marked rigidity lessened, a distinct mass could be felt in the lower left quadrant. On rectal examination the mass could also be felt. On the twelfth day after the child took sick, she became very restless, and complained of discomfort in her lower bowel. A rectal tube was inserted, but was forced out immediately, followed by an evacuation of pus and blood. Four hours later a similar evacuation occurred in which the nurse found the appendix. This amputated portion of the appendix was two inches long, and did not show marked degeneration except where it had sloughed away.

Two days after this occurred, a still greater mass was palpated. The abdomen was opened, and a good-sized abscess was drained. This was found to be a preperitoneal abscess, the floor of which formed part of the wall of a deeper abscess—the previously formed abscess which had ruptured into the bowel. The stump of the appendix was buried somewhere in this inflammatory mass of adhesions, and no attempt could be made to determine the relation of the anatomical structures.

The primary abscess continued to drain through the bowel for a period of two and a half weeks, and the superficial abscess closed about the same time. The child fully recovered, and apparently has been healthy since.

PERSISTENT TACHYCARDIA IN A THREE-YEAR-OLD CHILD

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The case that we have to report is that of a three-and-a-half-year-old girl who for at least two years has had a heart rate of more than 160 without discoverable cause.

Helen G. was born December 26, 1922, of neurotic but otherwise healthy parents. The mother had no other pregnancy. The Wassermann of both parents is negative. Neither has any cardiac abnormality, nor is there any history of serious heart disease in the family.

On the day the patient was born she was exposed to measles and developed a rash on the sixth day which the attending physician diagnosed as measles. The rash, which lasted only three days, was accompanied by mild coryza and slight fever. There were no complications. In spite of the unusually short incubation and prodromal periods, this sickness very probably was measles, as the child went through a widespread epidemic of the disease this past spring and summer with several intimate exposures and did not contract it. Aside from numerous acute upper-respiratory infections she has had no other childhood disease.

Her developmental history shows that she sat alone at 7 months, and walked and talked at 13 months. Her teeth erupted at the usual periods. She was entirely breast-fed for one year, and partially for seven months longer. She was not given orange juice regularly because she did not like it, nor greens for the same reason. She has always been a fussy, irritable child who demanded and received a lot of babying.

Her rapid pulse was first noted when she was one year old by the family physician, who called because of an acute cold. He mentioned to the mother that the

baby's pulse was so fast he could scarcely count it, but he did not say what the rate was. Several physicians who saw her in her second year during acute respiratory infections also noted the rapid heart rate.

The child first came under our observation in January, 1925, when she was just past two years of age.



Fig. 1. Bromid eruption in a four-months'-old infant.

She had an acute cold at the time, with a temperature of 99° per rectum, pulse rate of 200, and respiration rate of 40. As she was crying during the examination, the high pulse rate was largely discounted.

However, on a return visit for observation two weeks later, the heart rate was still 200 and the child was asleep during the examination. Her temperature was normal, and respirations 24. At this time she was 36 inches tall and weighed 26 pounds stripped—not a bad weight for a child who had been breast-fed so long. The liver and spleen were not palpable. The lungs were clear. There was no edema. The apex beat was in the fifth interspace, the left border palpated just within the midclavicular line, the right border at the right sternal margin. The heart sounds were clear and of a tic-tac quality. There were no missed beats, no premature contractions, no murmurs.

In view of the poor feeding history a latent scurvy was suspected, and a balanced diet with three ounces of orange juice daily was prescribed. This did not produce any change in the heart rate, but there was some improvement in the general nutrition.

Numerous observations have been made at various intervals in the 21 months since we first saw her. The lowest rate recorded was 160, the highest 200. The respirations have varied between 24 and 30. The blood-pressure readings have been interesting. The several readings made in her third year showed a systolic pressure of 90 mm. and a diastolic of 75 mm., while in her fourth year they have been remarkably constant at 85 systolic and 65 diastolic.

Three electrocardiograms were made. The interpretation of the cardiologist's report was that they all showed the impulse to arise in the sino-auricular node, that there is increasing left-sided preponderance, and that the rate is regular, the counts being 184, 190, 180.

She has developed normally both physically and mentally, although she still tends to be nervous and high-strung. Her activities are not voluntarily limited, and it is difficult for the mother to limit them. She runs and plays with other children, and shows no signs of early fatigue. She weighs 33½ pounds, and is 39 inches tall. In spite of the extra work the heart has been doing, there is only a slight hypertrophy. Palpation and percussion checked by a six-foot x-ray plate show the heart borders to be out just about 1 cm. There is no sign of myocardial insufficiency. The liver and spleen are not palpable. There is no moisture in the lung bases, and no edema.

A basal-metabolism test has not been attempted, because the only apparatus available is the spirometer type. The child, however, has no other symptoms or signs of thyrotoxicosis.

An unsuccessful attempt was made to slow the heart rate with digitalis, but the one preparation used was badly tolerated, and the mother refused to coöperate further. An effort will be made to hospitalize the child for further study, and a later report will be made of her progress.

SEVERE BROMID ERUPTION WITH SCARRING*

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PITTSBURGH, PA.

The skin manifestations sometimes caused by the injection of bromids, so-called bromid gummata, occur in adults with moderate frequency, but with less frequency in children. About one year ago, during a period when whooping cough was prevalent in Pittsburgh, a number of cases occurred in small children as a result of bromid mixtures used to quiet the paroxysms of coughing. Most of these showed verrucous masses on the cheeks, few having some on other parts of the body. The size varied, but was not in proportion to the time or amount of drug taken. Practically all these cases cleared up in the usual fashion, the end result being a smooth



Fig. 2. Showing scarring after healing of eruption.

skin without visible scarring. The case presented here was unusual in that it was very severe, and, due to an accompanying dermatitis and secondary

*From the Department of Dermatology of the University of Pittsburgh.

infection, small irregular depressed scars remained.

Baby G., white male, aged 4 months, presented numerous lesions on the face and scalp, and a few scattered ones on other parts of the body. The lesions varied greatly in size, some being as large as an inch or more in diameter. All were verrucous in character, and contained numerous miliary abscesses. The skin between the lesions showed a typical infantile dermatitis. The child was quite fat and seemingly overfed. Congenital cataracts were present. The statement of the mother was that for some weeks the child had been restless and did not sleep very well. A mixture, later found to contain bromids, was prescribed, and after several weeks the eruption appeared. It had been present two weeks when the child was first seen.

The dermatitis was treated with coal-tar ointment, diet, and small doses of x-ray with good results. For the bromid eruption, intravenous injections of one-per-cent sodium chlorid were used twice a week, about 10 c.c. each time. The injections were given with difficulty, as the veins were not easy to locate and the anterior fontanel was almost completely closed. After about four weeks, both eruptions had entirely disappeared, save for the previously mentioned scarring.

THYMIC DEATH IN A CASE WITH NO PREVIOUS SYMPTOMS AND NEGATIVE X-RAY

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SCRANTON, PA.

This was not a thymic death of the respiratory type in which symptoms frequently permit a diagnosis and institution of successful treatment before the fatal attack, but rather was of the circulatory type—the so-called status lymphaticus in which no definite previous symptoms are detected until the fatal seizure occurs.

During the period of 1923 to 1925, a number of sudden deaths occurred in our institution among apparently healthy infants. These infants showed no symptoms that might point to the thymus as being the possible site of trouble. It was only after a careful checking of the records, together with a complete postmortem examination, showing a rather definite increase in size of the thymus and a definite lymphoid hyperplasia involving the mesenteric and bronchial nodes and the intestinal lymphatics, that a definite cause of death could be arrived at.

We have found no definite signs or symptoms by which our suspicions might be aroused before the fatal attack occurs, with the possible exception of one. This may have been only a coincidence, but in all the fatal cases except one there was vomiting without apparent cause at some period or other, in several of the cases quite marked, and projectile in character, so much so that atropin was given before feeding. In the other cases the vomiting was less characteristic and less persistent, but present, nevertheless.

The so-called "status type" of child is very difficult to detect. Most of these infants have a rather fat, flabby appearance, but this appearance exists in others without apparently any status tendency. In view of our inability to recognize this type, we decided on routine roentgen-ray examinations of the thymus of all infants under one year of age (our deaths occurred between three and ten months of age). The case reported had an x-ray examination at the age of six weeks, not because of any symptoms, but merely as a routine. The report was negative.

J. E. P., full-term baby, had a normal birth. His weight was 5 lb., 12½ oz. He was born in our hospital on April 7, and died July 18, 1926. One child of the same father and mother is living and well, and is now 18 months old.

The mother had a negative Wassermann, and was negative to gonococcus infection. Routine examination of the placental blood was negative. The child was breast-fed for two weeks, when his mother insisted on going home, and the baby was put on Marriott's lactic-acid milk, 2½ oz. every three hours. On June 2d he started to regurgitate. At that time the weight was 7 lbs., 8½ oz. The stools were normal. On the 6th and 7th, vomiting was projectile, and once there was retention vomiting. No peristaltic waves were observed. Abdominal examination was negative. On the 8th, atropin was started twenty minutes before feeding. The vomiting gradually decreased during the following ten days, and between June 18th and July 18th, the date of death, vomiting occurred only three times, and this was a regurgitation and not of the projectile type. On the morning of July 18th, when the baby was being fed, the nurse said he suddenly threw back his head, the eyes rolled, the face became cyanotic, and the baby appeared to be in a convulsive seizure. Suddenly he relaxed, became quite pale, and was dead within a minute. Dr. George Clarke's postmortem report states:

"Thymus gland markedly enlarged, and quite firm. Dissection began at upper third of pericardium, and showed thymus pressing upon subclavian veins, almost surrounding them. The thymus extends well up into the neck, reaching to the thyroid. Thyroid enlarged and quite vascular. Intestinal and mesenteric glands were enlarged and waxy in appearance, ranging in size from a pea to a lima bean."

This particular thymus was quite broad, but somewhat thin, and was not so heavy as other thicker specimens. Evidently the location and type of gland are important factors, as well as the size, in producing a fatal seizure. The x-ray, we believe, is our most valuable aid in diagnosis of this condition, but we do not believe it is infallible, as demonstrated in this case. If, for any reason, suspicions are aroused, x-ray therapy should be utilized in spite of a negative roentgenogram. A positive x-ray report, of course, must always, without exception, be followed with appropriate treatment.

ALCOHOLIC CIRRHOSIS OF THE LIVER IN A CHILD

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PITTSBURGH, PA.

Virgilia G., male, 3½ years old, was referred to the pediatric department of the Allegheny General Hospital by Dr. C. Conti, and was admitted November 11, 1923.

He was of Italian parentage, and his family and personal histories were entirely negative regarding tuberculosis, syphilis, or malignancy. At eight months of age he was supposed to have had meningitis, from which he recovered after two and a half months of illness. When ten months old he was given whiskey on account of weakness. During the first seven or eight days he was given a mixture of one tablespoonful of whiskey and three tablespoonfuls of water, in place of plain water, to drink. This was continued for twenty-five days. From that time on until admission to the hospital the patient drank whiskey whenever his father had it—sometimes every two weeks, and sometimes every five or six weeks. During the twenty days previous to admission to the hospital the patient drank one quart of whiskey as a tonic.

On examination, the liver was found to be enormously enlarged and extending several inches below the ribs. There was no ascites present. The spleen was not enlarged. Heart and lungs were normal. Wassermann was negative. There were no evidences of sarcoma or carcinoma.

The measurements made October 11, 1926, closely correspond to those made on previous occasions; viz., circumference of chest at nipples, 25 inches; circumference at umbilicus, 26 inches; circumference greatest extent, 26½ inches; distance from nipple line to greatest point, 7¼ inches.



Fig. 1. Showing lower border of liver in January, 1924.

The diagnosis of alcoholic cirrhosis of the liver was based on the alcoholic history and careful exclusion of other diseases and conditions which may produce enlargement of the liver. This diagnosis was concurred in by Dr. Isaac A. Abt, who examined the patient in February, 1926.

Alcoholic cirrhosis of the liver in young children is considered an extremely rare disease.

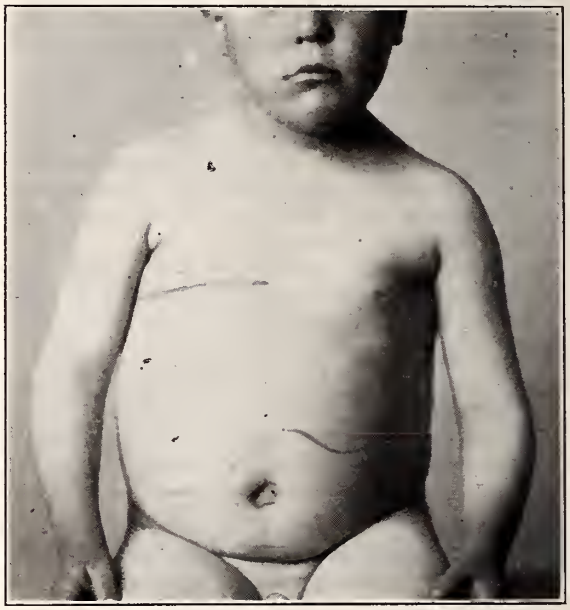


Fig. 2. Showing liver margins in October, 1926.

However, Fredricks reports thirty-six cases, Bamberger thirty-four, and Sanisbury, Sancet, R. Abrams, Herman N. Briggs, M. B. Kay, A. W. Foot, Fagge, Blakely, Roland, Marfan, and B. M. J. Oliver each one case, making a total of eighty-one cases. Their ages ranged from sixteen months to eleven years.

For the collection of the literature and statistics, I am indebted to Drs. C. E. Homan, and Elterich, Jr.

*Deceased July 26, 1927.

ILLINOIS JOURNAL ON EXHIBITS

Any physician who fails to visit the commercial exhibits at any of the state or national association sessions is missing a great educational feature. At the Washington session of the A. M. A., the commercial exhibits were of unusual interest from a scientific point of view, for at the exhibit could be found many instruments, drugs and appliances that were displayed for the first time, and most of them marked a distinct advance in the equipment offered for work in the better practice of medicine. Associated with the commercial exhibit was the scientific exhibit which year after year is becoming such an important feature in the educational value of our sessions. This year the scientific exhibit was of unusual merit, and any physician attending the Washington session could have attended the scientific exhibit continuously throughout his stay in Washington and found the time spent there exceedingly profitable. The scientific exhibit is an enormous expense to the Association, but it well repays the Association for benefits conferred upon members.

This applies equally to the Pennsylvania exhibits. Don't fail to visit them in Pittsburgh.

THE ATLANTIC MEDICAL JOURNAL

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SEPTEMBER, 1927

Editorials

LAST CALL FOR THE ANNUAL SESSION

This is a general reminder to our members who have not been aroused from their lethargy that the next session of the Medical Society of the State of Pennsylvania will be held in Pittsburgh, October 3d to 6th. Dante, in his "Ascent of the Mount," said: "All men are delighted to look back." But we are earnestly advising you to look ahead. Fore! If you have not completed your hotel accommodations you had better do so at once.

The purposes of a state medical association are to promote the science and art of medicine and the protection of the public health. Do you realize that this is a never-ending duty? Do you recognize its full import? If you do, then you understand the reason for the existence of our Society, and the part each member must play in furthering its aims and objects. You should fully appreciate then, the necessity for your attendance at the annual sessions. If the question were asked, "How can public regard and appreciation of the art and science of medicine be increased?" the answer would be education—education of the doctor and of the public. It is all-important that we have an organized profession, unified and united. This is one of the accomplishments of a state society. It means the harmonious working of our membership. It means "each giving to the others whatever advantage he may have to contribute, and in the most pleasant and friendly way vying with one another to see who can give the most." Attendance at the annual sessions "cultivates a professional uniformity and unity, and brings the most remote and humble doctor into closer touch and personal contact with his most learned, advanced, and successful colleagues." Medical men who deprive themselves of the sympathy, coöperation, and help that comes from the association with others of their profession are not independent, but show lack of wisdom.

"A medical society furnishes the help and sympathy which every doctor needs of his fellows, and the independent worker, whose originality and success give him a certain measure of independence, owes it to his fellows to associate himself with them. He will find that there is something for him to give, and something to receive." Don't forget! YOUR MOST IMPORTANT ENGAGEMENT is attendance at the annual session.

THE INALIENABLE RIGHTS OF THE MENTAL PATIENT

The Constitution of the United States insures to its citizens, life, liberty, and the pursuit of happiness in so far as the individual conducts himself in accordance with the statutes of his community, state, and government. Unfortunately, mental diseases with social complications necessitate that the sufferer be confined in safe keeping in order that the inalienable rights of society be zealously guarded. Such a commitment, however, does not deprive him of those inalienable rights to which suffering, sick humanity is entitled. The history of mental diseases, of the care and treatment of this great group of unfortunates, is filled with black pages —not in the least that society has not protected itself, but that it has failed in respecting those rights to which the patient in his illness is entitled. Such pages are not pages of the Bedlam period, but in reality are being written in this, the twentieth century.

It is said that we are living in a golden age, an age of Christianity and humanity, and America is reputed to be the excelling country of the

world. She is noted for her philanthropy, her charity and her Red Cross that can raise ten millions for refugees of a great calamity. Her valor and her heroism cannot be questioned. She has a heart that is easily touched. She has an open ear for distress, and yet in the midst of this, the feeble-minded are walking her fields and cities by the thousands, while mental patients are today landed in jails pending their hospitalization because bed spaces are not available. Her institutions are overcrowded, many are not fireproof, and with the possible exception of food and clothing, it is impossible to carry to this great group of hospitalized sufferers that type of treatment, prevention, and cure of which the rank and file of American physicians would be justly proud. May we not ask, then, "Can society, while insisting on its pound of flesh (that is, commitment, which means deprivation of freedom), rest with a clear conscience when the inalienable rights of the mentally sick are ignored to a great extent?

Society is not wholly to blame. Society reacts to intelligent appeals and worthy needs. Legislatures and taxpayers are not wholly to blame. The average business man and the average legislature is not familiar with the nature and the particular needs of this great group of sick people. Unfortunately, medical men interested in other fields are not wholly familiar with the individual needs. Society looks to medical men and not propagandists for its information. In order that we may fortify ourselves, would it not be well to reveal some of the inalienable rights of the mentally ill?

First and foremost, the public should be informed as to the nature, causes, prevention, and treatment of mental illness. This implies health examinations, mental clinics, and educational programs, incorporating only those sane things we know about mental diseases. Second, all agencies should coöperate in rendering service to the mentally ill, such as social agencies, general hospitals, etc. Third, the mentally ill, delinquent, and feebleminded are entitled to adequate hospitals. Fourth, adequate bed space, living rooms, food, clothing, outdoor recreation, and employment are necessary. Fifth, adequate professional care, medical nursing, and special therapies are needed. This professional group should have an adequate personnel. There should be facilities for physical, psychologic, and psychiatric study. Operating rooms, x-ray equipment, dental and laboratory services are needed, together with facilities for psychotherapy, occupational therapy, hydrotherapy, and physiotherapy (exercise, heliotherapy, and actinotherapy), as well as opportunities for recreation and diversion. Sixth, psychiatric hospitals should be available for scientific research and training of professional groups.

It is the inalienable right of every mental patient to have, from the incipiency of his illness, through his hospitalization, to his furlough and adaptation period, all of these things which are so well known to neuropsychiatrists as necessary to his understanding, treatment, and restoration. The mental patient cannot speak. His voice, except in some horrible conflagration such as homicide or murder, is seldom heard "beyond the wall," but in these exigencies his lamentations shock the civilized world.

Pennsylvania is awake. The fifty-million-dollar bond issue is before the public. Surely the medical profession will enlighten the people in their respective districts as to the urgency of its adoption by popular vote.

IRRITATION OF THE BABY'S SKIN

The July issue of the *Modern Hospital* calls attention to this subject under the heading of "Studies on Hospital Procedures," and reports having sent a questionnaire to "168 hospital administrators, 112 physicians (most of whom were pediatricians, although there were included a scattered number of obstetricians, orthopedic surgeons, and general practitioners), nine superintendents of schools for nurses, and one representative of a popular monthly magazine with a large circulation," asking the following four questions:

1. What is your practice in protecting babies against chafing?
2. Do you advise any special talcum or any powder, and if so, why?
3. Do you use creams or oils of any kind, and if so, what are they and why do you use them?
4. Has there been any change in recent years in the practice of protecting babies' skins during the diaper age, and what are your recommendations to mothers regarding this matter?

The article goes on to state that "upon a casual perusal of the answers it soon became apparent: first, that there was no unanimity of opinion in regard to the preventive or curative measures generally employed by physicians and hospitals; second, that the problem quickly assumed greater proportions than the mere recording of the powders, ointments, and lotions that were preferred because of their soothing and cleansing properties; third, that in the minds of many of those interviewed, prevention and cure had been somewhat confused. Since many valuable suggestions were made in regard to the latter phase, and since some of the procedures and preparations appear both preventive and

curative, the scope of this study was somewhat enlarged to cover the treatment of skin irritation and excoriation in the newborn."

Cleanliness, in other words prevention, was stressed as being the most important factor, and almost the only one on which everybody seemed agreed, as, when it came to treatment, the various methods employed were too numerous to mention, including, as they did, lotions, powders, oils, etc. It has been our experience for years, following the suggestion of Brenneman and Cooke, so far as excoriation of the buttocks is concerned, that if all diapers are *boiled,* never mind how slightly they may be soiled, this condition may practically always be prevented. In the few cases where such results have not been obtained by boiling, the immersing of the diaper, after it has been boiled and dried, in a solution of boric acid (1:20) for a moment and then allowing it to dry before again being used, will practically never fail to prevent this trouble.

The theory as to the cause of the condition, and the reason why this method of treatment is so successful is explained by Cooke, who "claims that he has isolated from the stools of these patients a Gram-positive bacillus which he calls Bacillus ammoniagenes. He states it is a saprophyte, and has the property of fermenting urea, with the production of ammonia. He shows that the growth of this organism is inhibited in an acid medium, but is abundant in a neutral or alkaline medium."

In our judgment, keeping the infants clean and treating the diapers as above mentioned will eliminate any necessity for the use of local applications, particularly if mothers can be persuaded to refrain from the use of powder on their babies, which, as the article we are discussing states, "are inclined to clog the pores of the skin or to assume the shape of an irritating ball when wet, and thus harm the child's skin, and that they too often contain gritty impurities."

We have even seen cases of so-called "thigh-friction" or "leg-rubbing" that were undoubtedly due to irritation of the clitoris produced by the use of large quantities of powder. Then, too, it is claimed that the material added to powders to give them the odors mothers so desire their babies to have are in themselves irritants, so that we qualifiedly agree with the statement of one of the physicians answering the questionnaire above referred to when he states he insists that "less powder be used on the baby than the mother uses on her own face, and that his rule is that he must never see powder on the child's skin."

Prevention, therefore, by the care of the diaper, rather than the treatment of the infant after the condition has occurred, is surely not only the wiser and better method to pursue, but is also in line with the therapeutics and principles of the day; i. e., prevention rather than cure.

ACUTE INFECTIONS A COMMUNITY HEALTH PROBLEM

Communicable diseases are the result of community habits and customs, and these will not likely be changed unless there is convincing evidence that the morbidity and mortality due to infectious diseases are too high.

It is a serious oversight for the welfare of a community to consider a minor infection, such as a common cold, a trivial affair to be ignored or endured instead of an opportunity to prevent widespread disease. Many of the deadly infections are interlinked with a common cold, the neglect of which may cause the oversight of a diphtheria or the beginning of a pneumonia, or other associated respiratory diseases, or be the means of spreading in the community virulent infections of carriers, as in scarlet fever, influenza, or epidemic encephalitis.

Another expensive habit is to attempt to treat serious infectious diseases under unfavorable environments. There should be proper isolation and supervision. When possible, these cases should be treated in a hospital rather than in a home, and should be in charge of a trained nurse.

On careful analysis, many a death can be ascribed to the attitude of the public and the medical profession toward serious infections. Fever usually means an infection, and in children it is the duty of the parents to have the nature of the infection determined early by a competent physician, who should at once outline a plan of treatment, thus giving the child a much better chance to make a recovery and preventing serious complications, often the result of neglect and delay in obtaining competent medical advice. It is of paramount importance that the treatment of infections should begin early, and statistics show that the mortality rate is much lower when treatment is started during the first twenty-four hours than when it is delayed for two or three days, during which time the family uses home remedies.

Many of the deaths at hospitals occur in patients who were treated at home in unfavorable surroundings until they were desperately ill and about ready to die and then sent to a hospital. This is unfair to the patient as well as the hospital. The patient is not given the best chance to make a recovery, and the unnecessary death reflects on the success of the work in the

institution to which he was admitted. There are seemingly a good many physicians who are in the habit of such a practice.

Some of the commoner acute infections in children which often do not receive the early efficient medical care they should have are colds followed by bronchopneumonia, otitis media, also diphtheria, measles, and scarlet fever. Efficient medical care for these diseases should always be obtained in the first twenty-four hours. Such prompt early treatment of the primary infection would often prevent serious and at times fatal secondary infections. Children should be given special protection during the first three years. They should be immunized against diphtheria and smallpox, and every possible effort should be made to prevent contact with active cases and carriers of the primary infections, including the common cold as a primary infection.

By proper coöperation on the part of the laity and the medical profession, the morbidity and mortality due to the common infectious diseases could be much reduced. The publicity committee of every county medical society could do much to educate the public to such community effort.

APPENDICITIS IN CHILDREN UNDER FIVE YEARS OF AGE

A very interesting review of the literature on this subject by Lyon appeared in the June issue of the *West Virginia Medical Journal,* the etiology, symptomatology, diagnosis, and differentiation being discussed at considerable length, and the article being followed by an excellent bibliography. The author states that, while "the etiology is essentially the same as in the adult," there are some factors of importance in the causation of this disease in children that rarely, if ever, occur in the adult, especially the invasion of the appendix by parasites, and acute nose and throat or respiratory-tract infections occurring as predisposing factors. Quoting Finney, the author says that "in adults the tendency is to mistake something else for appendicitis, while in children the tendency is to mistake appendicitis for something else." Again, quoting Helmholz and Deaver, "both insist that every acute abdominal condition in childhood should be considered appendicitis until it has been proved otherwise."

The two points on which the greatest unanimity of opinion existed among the earlier writers are (1) insidiousness of onset, and (2) tendency to rapidity of progress, to gangrene, and perforation. Pain, vomiting, and constipation are referred to as important symptoms, and considerable stress is placed on the difficulty of making a satisfactory examination of a child suffering with abdominal symptoms. The results of the blood examination, the temperature, pulse rate, and advantages of a rectal examination in children are commented upon, and the important points of differential diagnosis between appendicitis and pneumonia, as well as several other common diseases of childhood, are given in considerable detail.

While reference is made to the character of the breathing in appendicitis and in pneumonia, we desire especially to call attention to what is frequently the most important if not the only real point of difference between appendicitis and pneumonia previous to the onset of the pulmonary symptoms; that is, the respiratory rate, it always being more rapid in an oncoming pneumonia than in an existing appendicitis. Frequently the other symptoms, especially the temperature, abdominal pain, and the results of the blood examination, are so similar, with an equally sudden onset, that the rapidity of the respiratory rate becomes the most important factor in making the diagnosis.

CRIME

Possibly no other one subject has been given so much publicity through the medium of the press and free speech as crime. If we were to take into consideration that crime which comes to the limelight plus that which is not revealed, crimes of the twentieth century translated by an archeologist of the thirtieth century would show that America, true to form, excelled in all things, even in crime. Scipio's Carthage would show up as a mere piker in contrast. Be that as it may, we are experiencing a crime wave, which, unlike epidemics, will not decline unless some radical steps are taken to control it.

To control crime we must acquaint ourselves with the causative factors. That crime has been placed at the door of faulty home training, lack of theological control, a society of low morals and standards, our educational systems, economic stress, shyster lawyers, defective judicial systems, too much play and too little punishment in our penitentiaries, mental disease and mental defectives, cannot be denied. The freedom of purchase of weapons also has to be added.

Although crime is controllable to a degree, it will never be wholly exterminated. To anticipate a state free from crime is considerably Utopian; neither should we expect immediate relief. Getting "out from under" will be a long process, but our efforts may be successful in the end. No doubt all of the above factors con-

tribute to crime; and inasmuch as crime is dependent on a defective mechanism (educational, social, or moral) either inherited or acquired, the latter through faulty training or environment, it will be necessary to enlist all the agencies making up this environment—the home, the school, the church, the courts, and society—in an appreciation of the nature of the criminal, his ultimate elimination, and control. Science indicates to us that many of these criminal traits are manifested in early childhood and adolescence, and are subject to correction at this period. This being true, our duty is clear. Quite a shotgun prescription we agree, but is there any specific remedy for crime?

INCIDENCE OF RACHITIS IN BREAST-FED INFANTS

An article on this subject, written by Macke, and published in the *Medical Journal and Record* for May 4, 1927, should not be allowed to pass without comment, for it calls attention to a condition frequently overlooked, not only by the general practitioner, but even by the pediatrist. The belief is prevalent that rickets occurs almost exclusively in artificially fed babies, and is due to deficiencies in the food. To many, therefore, it will be a great surprise to learn that 70 per cent of a series of breast-fed babies (largely negroes, owing to the scarcity of available white mothers who were nursing their children) showed evidences of rickets, although, in many cases, a teaspoonful of cod-liver oil had been given regularly three times a day.

It surely would seem, as the author states, "that there must be some causative factor other than the type of food which is the most important element," and he mentions climatic conditions as one of these factors—which it undoubtedly is. It is probably little realized by the average physician that "the ultraviolet rays of the sun are preventive or curative only when exposure is between 10 a. m. and 1 p. m. daily, and also when this exposure is during the months of June, July, and August, as during the colder months exposure of the child is dangerous, and the ultraviolet ray is very weak during the winter season."

There can be no doubt that in cases where marked rachitic changes are observed in the seventh and eighth weeks, the condition must have existed from birth, for the most improper food, from either breast or bottle, could not have produced these changes in such a short time. It is well known that symptoms of rickets are present earlier in premature than in full-term babies, the reason for this no doubt being that the infant was markedly deficient in calcium at birth, since a very large percentage of calcium deposit in the infant's blood takes place during the last eight weeks of intra-uterine life.

Practically the only suggestion the author makes, and probably the only one that would be likely to be of any benefit in the prevention of rickets in breast-fed babies, is the proper dieting of the mothers. However, he urges only that this be done during the nursing period, whereas it would seem that a very much better time to correct the diet would be throughout the entire nine months of the pregnancy, more especially since the rachitic changes in many infants are present at birth.

The treatment of such cases, whether congenital or acquired, in breast-fed or bottle-fed infants, should include the proper diet, the use of cod-liver oil, exposure to the sun's rays or, when these are not available, the mercury quartz lamp. In addition, particular attention should be paid to a calcium deficiency, if present, and active steps should be taken to bring this up to normal at the earliest possible moment. In this connection, attention may be called to *para-thormone,* an active extract made from the parathyroid glands of cattle according to the method developed at the University of Alberta, Edmonton, Alberta, Canada, by Professor J. B. Collip. This has proved markedly beneficial in our hands for treatment of such cases. In a number of instances where the calcium deficiency has been brought up to normal in a remarkably short space of time by the use of this remedy, the good effect on many of the clinical symptoms of rickets has been marked, particularly when spasmophilia, gastric tetany, etc., have been present.

POSTSCRIPT

We have heard many comments on the excellence of this year's scientific program which was published in the August number of the Atlantic Medical Journal, but the best yet has come from the editor of the *Journal of the American Medical Association,* Dr. Fishbein. He says, we are told, that it is the best state society program he has seen.

The Committee on Scientific Work which prepared this "schedule of postgraduate work" is to be congratulated. Only those who have been on the inside and have seen the immense amount of work required to put together a program of this magnitude and quality can comprehend the energy, ingenuity, and discrimination that goes into its making; and only they can appreciate the executive capacity exerted by the chairman

of the committee. Dr. Thomas G. Simonton has headed this work since 1921, and it is largely due to the breadth of his vision and the broadness of his experience that the Society has been able each year to surpass its former achievements. The organization owes him and his faithful colaborers a vote of gratitude.

The following schedule of demonstrations by the Section on Surgery in connection with the Scientific Exhibit is suggestive that this exhibit will be carefully planned along lines of post-graduate instruction. It was received too late to include in the description of the exhibit which appears elsewhere in this issue, but inserted here will perhaps stimulate a reading of the pages devoted to the activities of the meeting.

Demonstrations of the Surgical Section at the Scientific Exhibit

Tuesday, October 4th

2.30-3 P. M.—Fractured Femur in the Newborn. Use of a Simple Fixation Apparatus.
DR. PAUL B. STEELE.

3-3.30 P. M.—Fractures of the Clavicle. The Application of a Simple Fixation Apparatus.
DR. LYNDON H. LANDON.

3.30-4 P. M.—Colles's Fracture. Method of Splinting.
DR. JOHN H. WAGNER.

Wednesday, October 5th

2.30-3 P. M.—Demonstration of a New Apparatus for Giving Intravenous Infusion.
DR. PAUL TITUS.

3-3.30 P. M.—Demonstration of a Blood-Transfusion Apparatus. DR. MOSES H. BAKER.

3.30-4 P. M.—Infection of the Extremities. Method of Applying the Large Wet Dressing.
DR. JOHN D. SINGLEY.

Thursday, October 6th

3-3.30 P. M.—Fractures of the Femur. Application of the Thomas Splint.
DR. JOHN H. ALEXANDER.

3.30-4 P. M.—Method of Applying the Molded Plaster Splint (Originated by Dr. J. J. Buchanan).
DR. MORRIS A. SLOCUM.

JOTS AND TITTLES

Medicoliterary Notes

WE EXTEND TO *American Medicine* our condolence in the death of Dr. H. Edwin Lewis, who had been its managing editor since 1908. Dr. Lewis died August 9th, at the age of 52, after a prolonged illness. He was a graduate of the Vermont Medical College, and founded the *Vermont Medical Bulletin.*

AT THE ANNUAL SESSION of the Maine Medical Association, held June 13 to 15, 1927, the editor and Council were authorized to take whatever measures they may see fit to bring about the merger of the *Journal of the Maine Medical Association* with the *Boston Medical and Surgical Journal.*

THE OFFICIAL PUBLICATION of the Pennsylvania Department of Health, formerly known as the *Listening Post,* has been rechristened *Pennsylvania's Health.* It is published bi-monthly, and reaches a circulation of 25,000, a large proportion of which is among lay people. It presents matters of public health in an interesting manner that will appeal to those unacquainted with technical medical parlance, and should be influential in obtaining coöperation with the work of the Department.

THE FIRST ISSUE of the *Cleanliness Journal* (July, 1927), "published occasionally by Cleanliness Institute," 45 E. Seventeenth St., New York, has been received. Its purpose "is to serve those whose tasks touch cleanliness—health workers, social-service executives, educators, leaders of civic clubs, home-economic advisers, editors, speakers, organizers." It is full of sprightly comment on the subject of cleanliness, and promises to be a real addition to the service of the public health.

THE SECOND ISSUE of the *Bulletin of the Antivenin Institute of America* (July, 1927) has been received. It contains a number of most interesting illustrated articles on snakes and treatment of their bites.

To Preserve the Birthplace of Walter Reed

THE LITTLE WEATHER-BEATEN HUT, Belroi, in Gloucester County, Virginia, that was the birthplace of Dr. Walter Reed, although long hidden by weeds, today is on the way to restoration, and the world will soon find an easy path to the tiny home of the man who earned the title of "the Father of Modern Public Health," made the world free of the scourge of yellow fever, and taught it how to combat typhoid successfully. He earned this title by playing a leading rôle in lengthening the average span of life from 38 years in 1890 to 58 in 1926. Restoring Belroi was the idea of Dr. Clarence Porter-Jones, through whose zeal the Walter Reed Medical Society of Virginia was empowered to effect the restoration. In addition, a million-dollar fund is being raised to establish at the University of Virginia Medical School a research chair where the experiments and work of the famous Virginian can be carried still further.

"Automobile Heart"

THIS TERM is used by a writer in the Philadelphia *Weekly Roster and Medical Digest* to designate a fairly constant set of chest symptoms which occur among middle-aged men who drive their own cars, due to violation of the principle that persons with circulatory embarrassment should never suddenly twist, turn, or strain. Speed seems to bear no relation to the symptoms; the distance traveled is also unrelated; it is the act of "backing in," with its consequent twisting of the body, turning of the shoulders, and straining of the neck, that calls forth the symptoms. In the cases of two robust physicians, one had his first attack of angina pectoris while backing into a garage; while the other collapsed at a curb with coronary thrombosis. It would therefore seem wise to caution heart patients or potential heart patients of the possible acute distress that may attend the twisting, turning, and straining of "backing in."

Help to Stamp Out Leprosy

PRACTICALLY THE LAST MESSAGE of General Leonard Wood to the nation was a call to raise $2,000,000 to aid in eradication of leprosy in the Philippines. This was a work very dear to his heart, and through his influence the Philippine Government now appropriates two per cent of its entire revenue to support of the leper

colony at Culion. This is not enough to answer to the great need and the greater opportunity. More is imperative if research is to be increased and care of the patients extended. With $2,000,000, said General Wood, within ten years leprosy might be brought entirely under control. More than a thousand persons have been discharged from Culion in the last year as cured. There are still 12,000 lepers in the islands, of whom almost 6,000 are at Culion. The disease can be entirely cured by proper treatment in its early stages, and can be completely arrested at a later stage, and the great need is to induce the people to seek treatment promptly. A national campaign for funds is now on. It is a project that appeals to the heart as well as to the intellect. Let us coöperate to the extent of our ability.

Increase in Percentage of Autopsies

The following statement written by a funeral director of our State interested in the securing of autopsies was sent out to 2,000 morticians in eight states. In addition, this cryptogram appeared in a recent issue of the *American Funeral Director's Trade Paper:* "The Medical Student, the Interns in Hospitals, and the Public want to know the cause of death. It will in time prolong life, for knowledge is power. Advise a family to permit an autopsy. If the hospitals are permitted to hold autopsies, that will insure better hospitals." This shows one of the ways this very important matter is being kept before the funeral directors, and is a form of the continued publicity to them which resulted from the coöperation between our State Medical Society and the Funeral Directors' Association of Pennsylvania.

Increase in West Virginia License Fees

The new fee system enacted by the West Virginia Legislature has become effective. This provides for an increase of all fees for those applying for license to practice medicine in that State. The fee for license by examination, which was formerly $10, has been raised to $25, while the reciprocity fee has been raised from $25 to $100. This increase in fees was passed at the present session of the Legislature at the request of the Public Health Council with the approval of the legislative committee of the West Virginia State Medical Association, with a view to making the council self-supporting and the fees more nearly corresponding with those charged by other states. Prior to this the Public Health Council has been financed almost wholly by the State.

Renting Antivenin

An up-State druggist has stocked antivenin and rents it out to his patrons who wander into the woods on their vacations and desire to have means at hand to save a life in case of a bite by a venomous snake. The outfit is listed at $7.50, and the druggist charges 25 cents per day. If the sealed package is returned intact, he takes it back, but collects the rent for the time it is away.

White Concrete and Conservation of Vision

A news dispatch says that Cameron County, Texas, is to have green concrete highways that will obviate the glare that usually comes from concrete pavement. It costs comparatively little to tint the concrete sidewalk or road, and probably this little would be more than balanced by the saving in sensitive eyes, with the possible accidents that glare may cause. We hear so much about glare from headlights and the damage it does, but comparatively little about glare from pavements. White concrete should be entirely replaced in all future road work by dark-tinted surfacing, more particularly in the sunnier regions of the country.

Physicians Urged to Study Emotions—More patients will get well and the medical profession will hold a higher place in public regard when physicians study the human emotions as prime causes of disease, according to Dr. Alice Johnson, clinical professor of psychiatry at the Woman's Medical College, Philadelphia, in a recent address to the Woman's Medical Alumnæ Association. The man or woman who is ill must be studied as a "unit," Dr. Johnson asserted, in declaring that too much of the average doctor's attention is centered upon the particular ailment of the patient and too little upon the psychologic causes of the disease. She declared that the mind and the body are inseparable and that both must be studied in relation to each other. "If we are to understand the meaning of disease, it will be necessary to consider the patient as a whole—what he is trying to do, and what prevents his doing it." The field of the emotions has been too long neglected by the medical curricula. Fear and rage have been found to produce the same bodily conditions as those resulting from pain, hunger, and severe muscular efforts. Depressing emotions have been found by scientific experiment to stimulate the ductless glands, while fear is a primary stimulant of the thyroid gland. "Hundreds of patients are allowed to go away from a medical consultation with the idea that their 'disease' is low blood pressure or something else. Why is it that the general physician shies off from an investigation of the emotional causes of disease? I believe it is because doctors distrust their ability to deal with psychic problems and do not wish to become acquainted with their own emotional life. When every doctor will recognize his patient as a unity, we shall have no evasion of the thinking-and-feeling function of life."

Honor to McDowell and Clay.—A distinguished philanthropic citizen of Louisville, Ky., Mr. I. W. Bernheim, has made it possible for Kentucky to be represented in the Hall of Fame in the Capitol at Washington by statues of two of its most distinguished citizens. The General Assembly created a commission consisting of President McVey of the University of Kentucky, President Colvin of the University of Louisville, and President Hutchins of Berea College. They have taken the time to consider the matter carefully, and, after corresponding with representative people not only in Kentucky but also distinguished Kentuckians who live elsewhere, they have selected Ephraim McDowell and Henry Clay. The *Journal* congratulates the State and the Commission upon these wise selections. Those familiar with the history of Kentucky and of mankind recognize in the "Father of Ovariotomy" and the "Great Compromiser" the two of our citizens who have contributed the most to human welfare. It is good for the nation that the story of these two great lives shall be kept before it.—*Kentucky Medical Journal.*

Not a Doctor's Name on the Committee.—An editorial under this caption in the *Illinois Medical Journal* for June states, "Mayor Thompson of Chicago has appointed a 'business committee' of three hundred citizens who are highly competent men of affairs, with an executive committee of nine, for the coöperation of public administration and private enterprise. This is a commendable, even a sagacious move on the

part of the mayor and should create the projection of administrative programs of great value and of unprecedented effect upon public welfare. The mayor chose from every influential walk of life except one—the medical profession. There is not a doctor on the committee. We are inclined to think that the gentlemen who act in an advisory capacity to the mayor in the selection of his committee must look upon the medical profession as a crew of ignoramuses and are unfamiliar with the fact that the medical profession have of necessity a finger in almost every human crisis. Is it possible that they do not care for some of the really expert opinions upon general welfare matters that come from medical men and women? Here is an instance proving the necessity of organization of the medical profession. Medical and allied interests working in unison to bring about the respect that is due them."

MEDICOLEGAL AND LEGISLATIVE NOTES

Recent Decisions of the Pennsylvania Workmen's Compensation Board.—In case 1 a decision was rendered that an employer is liable for the fee of the surgeon who treats the employee in the hospital where it appears that the contract for the services is between the employer and the physician. This is distinguished from the decision of the Board in Yost v. Coxe Traveling Grate Co. (7 Pa., W. C. B. 170).

In this case the referee awarded the claimant compensation for disability occasioned by an operation to correct a recurrent left inguinal hernia. He also awarded the claimant his hospital charges incurred within the first thirty days after disability began, but refused to allow the surgeon's fee of $100 for the operation on the ground that the surgeon was a staff physician at the Pottsville Hospital where the operation was performed. The defendant appealed from the referee's award, and the claimant appealed from the referee's refusal to award the surgeon's fee. The referee's refusal to award the claim and the fee of $100 claimed by Dr. Heller is based apparently, on the Board's decision in the case of Yost v. Coxe Traveling Grate Co.

The Board held in that case that where an employer sends an injured employee to the hospital, a member of that hospital staff who, in his ordinary and usual service to that hospital as such a staff member, performs an operation or personally attends the injured employee, cannot collect a professional fee for this service in addition to the usual and ordinary charge which the institution makes for its service to the patient. The basis of the decision is that there is no privity of contract between the employer and the surgeon, and that the contract is between the employer and the hospital.

We do not think that the decision in the Yost case controls the case at bar, nor do we think that the principle of that case should be extended beyond its own facts. In the present case the claimant was sent by his employer to Dr. Heller and not to the hospital, and Dr. Heller generally did the compensation work for the defendant company. Under his contract with the defendant company Dr. Heller was allowed to use his own discretion as to the treatment of the men sent to him. In accordance with the discretion vested in him, Dr. Heller placed the claimant in the Pottsville Hospital and there operated on and treated him. The case at bar is distinguished from the Yost case, and either the claimant or the defendant is responsible for the payment of the charges of Dr. Heller. It cannot be argued that the claimant must pay for the operation which was necessitated by an accidental injury sustained while in the course of his employment. The Compensation Act specifically allows a fee of $100 for such services, and under all the circumstances of this case we are of the opinion that the defendant is liable for this charge. The charge is reasonable and proper, is within the limits fixed by the Act, and was incurred in accordance with instructions of the physician who was acting for the defendant. In accordance with what we have said we will amend the referee's award to include $100 for the expenses of a major surgical operation, making a total award of $311.50. With this modification, the findings of fact, conclusions of law, and award of the referee are affirmed and the defendant's appeal is dismissed.

In case 2 the decision provided that an employer is liable for services of a staff physician of a hospital where the rule of the hospital permits a charge by such physician to ward pay patients. This is distinguished from the decision of the Board in Yost v. Coxe Traveling Grate Co. (7 Pa., W. C. B., 170).

The facts in this case are not in dispute. The claimant was injured while in the course of his employment with the defendants. He was sent by them to the Harrisburg Hospital for operation and treatment. The staff physician on duty at the time, Dr. Walters, was assigned to the case, the claimant having made no request for the services of any special physician. The defendants or their insurance carrier paid the hospital bill, amounting to $96.50, but refused to pay the bill of the physician, sent by him to the claimant, amounting to $100. Physicians on the staff of the Harrisburg Hospital are permitted by a rule of the institution to make charges against pay patients if permission to do so is granted by the medical committee or the superintendent. Permission was given in this case.

The evidence shows that the claimant is a man of sufficient property to be financially liable for the payment of the doctor's bill, and it also shows that the claimant will feel obliged to pay the bill if the employer does not. In other words, the physician's bill will be paid either by voluntary action on the part of the claimant or by proceedings against him. After the claimant received the doctor's bill, he filed a petition to review his compensation agreement to have it provide for the payment by the employer of the doctor's bill. The referee dismissed the petition and the claimant has appealed.

Of moment is the fact that the employee will either voluntarily or by compulsion pay the doctor's bill if the employer does not. If that result should come about, it would be in the teeth of section 306 (e) of the Compensation Act as amended in 1919. Under that section, the employer is liable for the hospital bill and the doctor's bill, within fixed limitations with which we are not here concerned since all agree that the charge here made is reasonable and proper, and within the limitations of the act. Whenever it becomes a question, as it is here, of whether the employer or the employee must pay the bill for reasonable and proper medical service rendered within the first thirty days of disability, the case is free from difficulty. The act specifically provides that the employer must pay this charge and not the employee. The superior contract created by statute, which is the foundation of the workmen's-compensation legislation, makes it obligatory on the employer to discharge the obligation, and to save the employee harmless. Under the facts of this case, the only manner in which the employee can be protected is by the em-

ployer paying the bill; we are of the opinion that he is bound to do this. On all the facts of this case we are satisfied that it is not ruled by the Yost case, or by any other case which we have decided. We are convinced that the plain terms of the compensation act require the employer to pay the bill of Dr. Walter. Since this charge was not included in the claimant's compensation agreement, the agreement should be modified.

We shall reverse the referee's order and modify the agreement in accordance with what we have here stated. The order of the referee is reversed and compensation agreement No. 1,916,883 is modified to provide for the payment by the defendant of the proper and reasonable medical service rendered the claimant during the first thirty days of his disability by Dr. Walter in the amount of $100.—*Labor and Industry.*

Interstate Carriers Responsible for Purity of Water Supplied to Passengers.—Two court decisions holding common carriers responsible for cases of typhoid fever contracted by passengers were published in U. S. *Public Health Reports* for April 1st. In one instance which occurred in 1915 the court awarded $1,500 to each of nine libelants who contracted typhoid fever from unpurified drinking water furnished to passengers without warning, although officers and crew had been warned. In the second instance 49 members of an excursion party on the Great Lakes filed claims against a steamship company for typhoid fever contracted while on shipboard. Agreement was reached between counsel, and $110,000 was accepted in full settlement.

Requirement of New Vaccination Certificate Under New Hampshire Act.—In a proceeding to determine the respective rights and duties of parents and public officers as to the vaccination of school children under New Hampshire Pub. Laws 1926, c. 123 §1, two questions were raised, (1) whether the statute is constitutional, and (2) whether a school board may require a new exemption certificate after one has been furnished. A proper certificate had been furnished in 1924. A demand for a new certificate in 1925 precipitated the controversy.

The constitutionality of vaccination statutes has been passed upon in many cases cited by the New Hampshire court, and the uniform conclusion has been that they constitute a valid exercise of the police power of the state. In some of these cases, the act was compulsory. In others, as in the New Hampshire act, the compulsion was indirect or partial. Under the New Hampshire act, the child may not attend school unless vaccinated or properly excused from vaccination, while, by Pub. Laws 1926, c. 118, §§ 1-6, the parent or custodian is liable to certain penalties for failing to cause the child to attend. The New Hampshire act is held to be constitutional.

The statute is silent as to how often a certificate may be required. Conditions making it improper to vaccinate the child at one time might not exist at a later date (Jacobson v. Massachusetts, 197 U. S. 11). The plaintiff's proposed construction of the act that in all cases one certificate is sufficient for all time was not adopted by the New Hampshire Supreme Court, which holds that the meaning of the statute is that a new certificate may be required whenever there is reasonable ground to believe that there may have been such a change of conditions that the child is no longer "an unfit subject for vaccination."

The burden was not upon the board to defend its action. Unless it violated some rule of law, its conclusion is final. It is for the complaining party to show such violation. Barber v. School Board of Rochester (N. H.) 135 Atl. 159.—*Medical Journal and Record.*

An Unusual Compensation Case.—According to the press, a Presbyterian minister of Glendale, California, "overpreached" while delivering a sermon recently, and as a result has applied to the State Industrial Accident Commission for compensation for injury. He declared that he strained a muscle while gesticulating in the delivering of a sermon, necessitating an operation. He seeks reimbursement for medical expenses and loss of time during his recuperation. His application is the first made by a church employee since the commission informed such workers a year ago that they were eligible for compensation in case of accident.

PUBLIC HEALTH

Activities of the State Health Department.—Increasing use is being made of the mobile laboratories and motorized health cars. Two such laboratories were involved in the annual survey of individual highway water supplies during the summer. It is estimated that a total of 3,000 miles were covered, and that nearly 4,000 inspections were made, not including re-surveys. Tests are also being made to determine the conditions, polluting factors, and measures of control of the Schuylkill and Allegheny Rivers and others of the more important streams in the State which are affected by industrial wastes and sewage. Sanitary inspection of 87 coal-mining towns in Allegheny County was recently completed, the motor laboratory assisting in this work.

The staff of the two motorized health cars which began work on June 1st in rural communities has examined more then 8,000 children, who were referred to their local physicians for correction when needed.

As a result of the coöperation of local physicans, thousands of residents in the rural districts remote from established centers, more than half of whom were children, were examined at the extension tuberculosis diagnostic clinics. These clinics included a motorized laboratory for biological work, and a unit of staff physicians and nurses accompanied the laboratory, the clinic proper being held in an empty schoolroom or other available space. Approximately half of the children examined in these sections were sent to Cresson or Mont Alto, and many adults were listed for the three State sanatoria.

The tuberculosis clinics are becoming increasingly popular. There were 6,000 clinic visits during the last 30-day period, and 1,254 of the patients were between the ages of 6 and 16—indicating an interest in the disease at the time of life when the best results may be obtained.

The Milk Division recently conducted an investigation of the milk-receiving stations in Ohio, the output from which (approximately 100,000 quarts daily) is used in Allegheny County. This work completes a three-months' intensive investigation of all milk used in the county, during which many unsatisfactory conditions have been remedied.

The pathologic examinations connected with the electro-pure process of pasteurizing milk have been completed, and the process has been approved for use in Pennsylvania under such conditions as the Department may determine.

The Section of Restaurant Hygiene has been actively engaged in the inspection of restaurants throughout

the State. The survey involved thousands of eating places. Several arrests were made, and convictions secured under the new law.

The Department recently consolidated the birth-registration districts. Every effort is being made to obtain the complete number of births in the State, but it appears that this can be accomplished only by a house-to-house canvass, checking with baptismal records in local churches, birth notices, and deaths of children under one year of age.

Typhoid fever again came to the fore in Collegeville. This community relies upon individual sources of water supply, and no general sewage system exists. The city council is now seriously considering the installation of a public water supply. In Johnstown some weeks ago, heavy rains made the regular water supply muddy. While the overtaxed filters were unable to accomplish clarification of the water, complete sterilization was nevertheless effected. Unfortunately a number of families in the Cambria city did not like the looks of the water, so carried their drinking water from an open spring which was clear, cold, and *polluted.* Typhoid fever resulted.

"Immunization Hour" in York County.—At a meeting of the York County Medical Society on July 7th, the following resolutions were adopted: *"Resolved,* that each and every physician who desires to do immunization work shall designate one hour each week as "Immunization Hour" and shall exert every possible effort to induce the parents among his clientele to have their children presented at his office during this hour for immunization against smallpox and diphtheria as well as any other communicable diseases for which immunization may be provided. The several health departments and the Visiting Nurse Association shall be requested, in writing, to coöperate in these efforts by referring all immunization cases, including those who are unable to pay, to these physicians. Be it further *resolved,* that the Health and Public Instruction Committee shall periodically supply the local press with information relative to this innovation and shall also endeavor to secure official recognition of the organized medical profession in every future welfare movement in this community, undertaken with the assistance of its members."

Registration cards were sent out by the executive committee, with a request that all physicians who desired to coöperate return the card within five days, failure to be construed as a negative reply. A list of those who were available for this work was to be furnished to the community welfare organizations which desired to coöperate by referring cases for immunization.

Authentic Information on the Montreal Typhoid Epidemic.—With permission of the Deputy Minister of Health of Canada, the Surgeon General of the United States Public Health Service sent a board consisting of three medical officers and a sanitary engineer to Montreal for the purpose of securing data on the typhoid epidemic and ascertaining what additional measures might be necessary for health officers to enforce in this country against the spread of the disease from Canada. The board, consisting of Dr. L. L. Lumsden, chairman, Drs. J. P. Leake and C. E. Waller, medical officers, and H. R. Crohurst, sanitary engineer, concluded that the epidemic was beyond reasonable doubt caused by infection distributed in milk from the plant of the Montreal Dairy Company, Ltd. There was evidence that the infection originated at farm sources, and that a very considerable proportion of the infected milk was passed through the plant without pasteurization. At the time of the investigation, June 18-29, milk and milk products derived from sources within the general vicinity of Montreal did not appear to be processed under satisfactory sanitary conditions nor under official health supervision approaching adequacy. Tourists were, therefore, advised to shun Montreal for months to come unless local health service was made much more nearly adequate than it was at the time of the investigation. In addition, it was recommended that milk or milk products shipped to the United States, "before being distributed to consumers be pasteurized or otherwise processed under official supervision so as to be rendered free from typhoid, tuberculosis, or any other infection likely to endanger human health."

The report of the Surgeon-General stated that in the period from March to June 28th, there were 4,756 cases of typhoid fever and 453 deaths from that disease in the city of Montreal. For the ten days ending June 28th, the number of new cases averaged 10 per day, mostly contacts. It is pretty generally agreed that the reason for development of an epidemic of such proportions was insufficient appropriation for health work, and resulting undermanning of the health service.

War on Rats.—Rats are probably decreasing in numbers in the U. S., although their decrease is only beginning to be apparent, according to the United States Department of Agriculture, Washington, D. C. Although getting rid of rats is largely an individual problem, rat infestation has a serious effect on the whole community, and organized control effort is highly desirable. A person who allows rats to increase on his property until they menace the entire neighborhood becomes an object of public concern, and a city that permits its refuse dump to serve as a breeding place for hordes of these pests is committing a grave injustice to its population. Ridding a community of rats can best be accomplished by organized efforts of all the citizens. The Department will gladly assist organizations, through the Biological Survey, in planning, organizing, and prosecuting antirat campaigns by furnishing preliminary plans, general instructions, sample copies of posters, and other publicity material and, where possible, the personal services of a leader.

Care of the Eyes of School Children.—The De Kalb County (Illinois) Medical Society, and the De Kalb County Public Health League held a joint meeting at which Dr. G. Henry Mundt, of Chicago, gave a splendid address on the "Care of the Eyes of School Children," urging that the preschool child should be examined especially for inflammatory conditions of the eyes and for cross-eye. Dr. Mundt emphasized the fact that a child allowed to grow up with a crossed eye grows up with a blind eye or at least a very defective one. A crossed eye should receive attention as soon at it develops and before the child starts to school. Children with contagious eye diseases should be excluded from school, and if the disease is of a chronic nature, such as trachoma, they should remain away from school until the child and the family are educated to be careful about spreading it to others. Continuous close work like sewing and weaving are injurious to the eyes of children up to the tenth or eleventh year. Glaring lights are injurious at all ages, and lights should be shaded for protection from direct glare into

the eyes, as well as from reflected glare from manuscript. Myopia or nearsightedness is the most serious of the refractive errors for which glasses are prescribed. It is often brought on by eyestrain in early childhood, and if the condition is found to be progressive, the child should be excluded from school and from all close work for one year. Dull, slow children often suffer from defective vision or defective hearing and pep up when these are corrected.—*Illinois Medical Journal,* June, 1927.

HOSPITAL ACTIVITIES

International Hospital Convention.—A preliminary conference to discuss an International Hospital Convention will be held in Paris, France, on September 19th, at the headquarters and through the generosity of the League of Red Cross Societies. This conference was brought about by the activities of the Committee on International Hospital Relations of the American Hospital Association which has been in communication with representatives of hospital activities in many countries and has found a uniform consensus of opinion that such a convention would be greatly beneficial to all concerned. The American Hospital Association Board of Trustees has appointed the secretary of the committee, E. H. L. Corwin, Ph.D., of the Hospital Information Bureau, New York, and Joseph C. Doane, M.D., of the Philadelphia General Hospital, Philadelphia, as official representatives to the conference. Several national associations have been invited to render assistance and coöperation, and likewise to defray the expenses of a representative to this preliminary conference. The conference was called in order to prepare the groundwork of an international convention by deciding on the place and time as well as the program and plan of the convention, with scientific and commercial exhibits. It is planned to present, at this preliminary conference, an exhibit of the features of the American Hospital Association annual convention, including photographs and floor plans of scientific and commercial exhibits as well as of the year books.

Serious Difficulties Face Small Hospital That Seeks an Intern.—Securing interns is much more of a problem in the hospitals in smaller cities and towns than in the larger cities. The young doctor, in selecting a hospital for internship, has in mind the opportunities that large hospitals, some of them connected with a medical school, have to offer in the way of training during his internship, and also the possibility of an assistantship in his chosen line when his intern service is ended. In addition, there is the social life and many other interests in the city which are not to be found in smaller communities. However, many of the hospitals outside the larger cities, because they serve wider districts (very largely industrial), may offer opportunities for study of types of cases not found in the city hospitals, and therefore provide internships quite as attractive and valuable from an educational standpoint.

In recent years, with the rapid growth of hospitals, there are not sufficient medical students graduating from accredited medical schools to supply the demand for interns. There are graduating, this year, from the six medical schools in Pennsylvania, four hundred and forty-eight medical students. There are in Pennsylvania eighty-one fully accredited, four six-months', and twenty-seven three-months' accredited hospitals for interns.

Because of the shortage of interns, the community hospitals, in order to compete with the hospitals in the large centers, have been forced to offer some inducement other than educational facilities in the way of an allowance or small salary. This is done, not to attract the best type of intern, but in order to secure applicants at all. Of the thirty-six community hospitals in Pennsylvania answering a questionnaire, four give no allowance, two provide uniforms with no monetary allowance, the others all give an allowance of from twenty to fifty dollars per month. In addition to the monetary allowance, many provide uniforms. Two hospitals give a bonus of one hundred dollars in addition to the salary if the intern year is completed satisfactorily. The system of appointing interns in Philadelphia is thought by many to be a handicap to the community hospitals in securing interns.—*Hospital Management.*

Group-Nursing System.—St. Mary's Mercy Hospital, Gary, Ind., has had in effect for nearly two and a half years a modified form of group nursing that has attracted a great deal of attention throughout hospital circles of Indiana, and in other places where details of the system have become known. Briefly, the hospital furnishes an individual special nurse for a patient desiring this service, and a graduate nurse who also has care of several other patients at night, for the usual charge asked for a day of special nursing—$7. Of this charge, the day nurse, who is on duty from 7 to 7 receives $6, and $1 goes to the hospital which pays the salary of the group nurse on night duty. In addition to this charge, there is a fee of $1.50 for meals for the special nurse, and this charge also includes any meals that the group nurse may eat during the night.

The first step was a meeting of the alumnæ of the school of nursing and of other graduate nurses on call at the registry of the hospital. The plan was explained to them in detail, and the nurses were asked to give it approval by signing a paper outlining the plan which also calls for a rotating two-weeks' night service as a group nurse for all nurses on the registry. Because of the seriousness of the situation with reference to special nursing, the nurses were unanimously in favor of the plan, and then the officers of the hospital and of the school presented it for the approval of the staff. The physicians endorsed it without opposition, with the reservation, however, that it was to be undertaken purely as a trial, and if it did not work in the estimation of the physicians, the old system would be restored. "That was in 1924, and now under no circumstances would either the physicians or the nurses go back to the old."

Each patient taking advantage of the group-nursing service pays $7, which is the charge that was made under the old plan of one nurse on a 24-hour shift. As stated, $6 of this sum goes to the day nurse, and $1 is retained by the hospital toward payment of the group nurse at night. In some instances, as many as seven patients have been cared for at night by one group nurse, but as indicated, the condition of the patient is the governing factor. Again, there may be three or even less patients for one group nurse, in which case the hospital must make up the difference between the salary of the group nurse and the amount collected from the patients. Each group nurse is paid $30 a week, according to the agreement signed when the system was put into effect, and each nurse on the registry has obligated herself to serve for a period of two consecutive weeks as a group nurse.

Service is in alphabetical order. The system has resulted in such general satisfaction that the authorities of the hospital and of the school now are endeavoring to extend it over 24 hours.

From the standpoint of the hospital, the outstanding advantages of the group-nursing plan, as they have developed in connection with St. Mary's Hospital, are: Better service to the patients. This is due to the fact that the day nurse goes on duty fresh after a good sleep and is physically and mentally fit, whereas under the old 24-hour system she frequently would be so worn out by continuous service as not to be of great value to her patients. Likewise, the group nurse at night has the advantage of regular hours and opportunity for recreation and mental development, with the result that she is better prepared to serve her patients. Another factor that has been found advantageous to the patient is that there is less noise and disturbance at night than if four or five special nurses were moving about the floors and in and out of the rooms. Still another advantage is that the plan obviates the necessity of the nurse sleeping in the patient's room. Experience has shown that as a result of this patients have been able to enjoy much better rest and, as the school authorities have pointed out, the patient who does not require more service than that given by a group nurse certainly does not need to have a nurse sleep in the room. The hospital also finds group nursing advantageous to it because of the better health of the graduate nurse, permitting more regular service from them and less substitutions. Another important advantage is the wonderful improvement in the spirit of the graduate nurses. From the standpoint of the physician, the outstanding advantage has been the better care given the patient through the factors outlined.

The hospital and nursing authorities are of the opinion that this same plan can be carried out in almost any hospital, provided the alumnæ and other graduate nurses and the physicians will join as they have done in this instance. One advantage to the hospital that the school of nursing authorities particularly like is that the presence of these group nurses on the different floors has a most stimulating effect on the student nurses by giving them a greater confidence through the thought that experienced advice or assistance is available if it ever should be necessary to ask for it. The group-nursing service, however, is entirely distinct from the student body, except that the group nurses are relieved by students at 10:30 p.m. for night supper. Another pleasing result is the absence of special-duty nurses in dishabille in the hospital corridors.—*Hospital Management.*

Is the Hospital Administrator Fulfilling His Responsibilities Toward His Nurses?—Hospital administrators and hospital boards have spent many anxious hours during the past few years trying to devise some plan by which the ever-mounting cost of nursing could be reduced to the patient; some plan by which students would be attracted into their hospital schools; some scheme by which students could be induced to remain and render the greatest possible service to the hospital at the least possible cost to that institution. The education of the nurse must be provided for in precisely the same manner as other branches of education; namely, by general taxation, instead of attempting to continue the present unsound system of compelling the sick patient to support an educational program concerning which he knows nothing and to which he is contributing without his knowledge. A nursing school grows more expensive to maintain as the years go on, and there seems to be no possibility of reducing this expense in the future. The only alternative the hospital has, therefore, is to change over to a full graduate-nurse staff. Whether a school of nursing is maintained or whether a full graduate-nurse staff takes its place, the hospital finds itself unable to reduce the price of nursing to the patient who is already complaining of the exorbitant hospital prices. The hospital administrator and his board have, therefore, a real and pressing problem to solve in relation to the nursing service.—*Modern Hospital.*

INDUSTRIAL MEDICINE

To Study Industrial Health Conditions.—Dr. Thos. R. Crowder, president of the American Association of Industrial Physicians and Surgeons, has appointed a committee to study the health and safety hazards in the twelve major industrial groups represented in the membership of the Association. These groups include automobiles, chemicals, electrical, food, foundries, iron and steel, metal, mining, public utilities, rubber, textiles, and office and trade. Each member of a committee will make an investigation of those conditions in his own organization entailing possible or positive health hazards. This information will be assembled for analysis and study. The results will be made available through the *Bulletin* of the Association.

It is believed that no one can be found better equipped to study and estimate properly the conditions of modern factory and office life than the medical director whose chief concern is the well-being and safety of those employed in such work. Each industry is confronted by problems peculiar to its own conditions of employment. These problems belong, primarily, to the industrial physician whose experience has already given him an intimate knowledge of the conditions that effect the health and safety of the employees in his own organization. It is expected that the assembled information resulting from this study will form a worth-while contribution to the question of industrial medicine and hygiene in this country where this investigational type of work has lagged behind similar work in Europe. On the other hand, the development of medical organizations in industrial work in America has far outrun similar activity in European industry. With the completion of the work now under way by this committee, the health problems of major industrial groups in this country should be better appreciated than they are at the present time.

Reduction of Eye Losses in the Steel Industry.—A striking feature is the fact that the metal and metal-products industry of Pennsylvania has been steadily decreasing the number of eye losses reported to the Department of Labor and Industry over a three-year period. It was during this time that a determined effort was made by the Department inspectors throughout the State to insure the wearing of goggles. In every other industry over which the Department has jurisdiction, there are gratifying reductions in the number of eye losses with the exception of the chemical industry, quarries and mining other than coal, lumber and its remanufacture, state and municipal, jobbing and warehousing, and miscellaneous. These latter industries, contrary to the general trend, show an increase in the number of eye losses reported. In the case of the chemical industry, the increase is almost 100 per cent, and is one which warrants attention on the part of those engaged in this industry. The same is also true

in the quarry and mining industry, where the increase is over 100 per cent.

Every accident involving injury to the eye which is reported to the Department is looked into or an inspector of the Department visits the plant where the injury occurs. In over 90 per cent of these investigated cases, the injury has been due to the failure on the part of the employee to wear the goggles which the State has required the employer to furnish for his use. In a few instances, owing to the nature of the work, goggles were not provided, or they were found unsuited for the particular kind of work which was being done. All such conditions were rectified immediately, and it can be safely stated that goggles today in the State of Pennsylvania are being furnished by manufacturers to their employees, and if these goggles were worn at all times, the number of eye losses would be reduced materially.

Superintendents and foremen should insist upon the men wearing goggles. In many cases where department inspectors have investigated cases of accidents involving eye injuries, it has been found that employees have persisted even after injury in not wearing goggles, and in such cases the management has dismissed them. The management which gives the excuse that the man cannot be made to wear goggles is simply admitting its own inability to enforce shop discipline. The evidence is too overwhelming that men can be made to, and will be willing to wear goggles, provided they are approached in the right manner and are given proper consideration with respect to the matter of prescription goggles where faulty eyesight has to be considered, or are properly fitted when the contour of the face demands it.—*Labor and Industry.*

Development of Departmental Regulations.—The first step in the development of the Pit and Quarry Regulations in Pennsylvania was a study of the accident situation by an analysis of the accident reports received by the Department of Labor and Industry and by a thorough investigation of conditions as they actually exist in the pits and quarries. Practically every quarry in the State was inspected, and the hazards which seemed to exist were discussed with the quarry operators and the men actually working in the quarries. This work, while consuming considerable time, gave the Department such thorough knowledge of the conditions actually existing that it was possible to prepare a tentative draft of the proposed regulations, which was received generally by the industry as being practicable and reasonable. The final draft of the regulations which have been promulgated is looked upon with favor by the quarrying industry. The industry as a whole better understands its own problems, and is united in thought as to its needs along accident-prevention lines.

The regulations were not formulated in time for the Department to apply them during the year 1926. It is pleasing to note, however, that there was a substantial reduction in the number of accidents in quarries in 1926 as compared with 1925, thus proving that the development of the regulations created interest in accident-prevention work. It is noted that the majority of the decrease in accidents in this industry occurred in the months of the year following the establishment of the contact between the Department and the quarry industry. Some quarries, as a result of their safety work, have been able to run for long periods of time without a lost-time accident, and it can be shown that these quarries did not have any form of safety organization prior to the presentation of the matter to them by the Department during the development of the regulations. Such activity, when followed more completely by the industry through application of the regulations, can result in only one thing—a tremendous reduction in the number of accidents charged against the industry.

Another benefit of this development policy is the reduction of insurance rates. The insurance interests of the State, through their safety committee, have recognized the practicability of the regulations of the Department and have adopted them completely. This not only insures entire uniformity in standards, but has made possible, through the information which the Department has been able to furnish the insurance companies, a readjustment of the insurance charges and substantial reduction of the minimum rates. The quarry that establishes an active safety organization, follows the regulations in detail, and employs nothing but safe practices in its operations will save itself hundreds of dollars a year in the elimination of insurance charges and in the reduction of the minimum rate. In addition, the quarry operator benefits from a reduction of all other compensation costs and a general increase in production from his employees.—*Labor and Industry.*

Another Way of "Driving Home" Safety.—Familiarity with safety literature, slogans, and posters often causes workers to ignore them, but the DeLaval Separator Company, Poughkeepsie, New York, has devised a scheme which reaches every worker every day. Short, snappy safety slogans are printed in bold-face type on every job ticket, so that old workers are confronted with a safety reminder every time they pick up their job tickets, and new workers are at once impressed with the realization of the earnestness of the safety talks. These slogans would, of course, lose their effectiveness were they permitted to become stale in the workers' minds, so the slogans are changed about every two months. The use of the job-ticket slogans assures that every worker will read the slogan, at the very least, one time, and that his attention will be attracted to the safety reminder almost unconsciously many times during the two months.—*The Factory,* July, 1927.

Census of Nurses in Industry.—The Statistical Service of the National Organization for Public Health Nursing is now preparing to take a census of nurses in industry. At present there is said to be little definite information available as to how many nurses are working in industry, where they work, and what they do. The term "industry" is here planned to include not only manufacturing interests, but also all types of business, such as mining, commerce and trade, transportation, public service, etc. The study will include both nurses employed directly by such companies, and also those employed by various nursing organizations who work in industries or give nursing service to employees. The National Organization for Public Health Nursing will appreciate the receipt of names of any companies which buy nursing service. All such information should be mailed to the organization at 370 Seventh Avenue, New York City, attention of the Statistical Service.

In this connection, the JOURNAL was interested to receive a Directory of Industrial Nurses in Pennsylvania, listed according to the establishments in which they are employed, prepared by the Bureau of Women and Children, Department of Labor and Industry, Commonwealth of Pennsylvania. "This directory is issued with the knowledge that it is incomplete, but with the hope that by publishing it other nurses and other establishments not included will offer the Department an opportunity to add their names to the list."

The Seventy-Seventh Annual Session

The Hotel Schenley, Fifth Avenue and the Boulevard, Pittsburgh, has been chosen as the headquarters for the seventy-seventh annual session of the Medical Society of the State of Pennsylvania, which will convene on Monday, October 3, 1927. In the morning of the first day the Board of Trustees will meet in Parlor 2 on the second floor of the hotel, and in the afternoon the House of Delegates will hold the opening legislative session in the French Room on the second floor of the hotel. The evening will be taken care of by the Allegheny County Society, which has arranged for a theater party.

Our Society has grown to such imposing proportions that there is scarcely a hotel in the State able to accommodate all the activities of an annual session, so arrangements have been made with the beautiful University Club, just across Fifth Avenue from the Schenley, to take care of a large part of the overflow. Here the guest speakers will be entertained; here club meals will be served at reasonable rates to all who present the buttons obtained on registration; and here, on Tuesday morning at 10 o'clock, in the Lounge on the first floor, the General Meetings will open. A most attractive program has been arranged for these meetings, as you doubtless discovered on inspection of the program published in the August number of the JOURNAL. Among the guest speakers will be Dr. Jabez N. Jackson, of Kansas City, Mo., president of the American Medical Association, and others whose names appear in the center of this page.

In the afternoon, the scientific sections will meet—Medicine in the Lounge of the University Club; Surgery in the Ballroom in the basement of the University Club; Eye, Ear, Nose, and Throat in the French Room on the second floor of the Schenley; Pediatrics in the new Children's Hospital; and Dermatology in the Library on the first floor of the Hotel.

Wednesday afternoon the same arrangements will be carried out for the Medical, Surgical, and Specialties Sections, but Pediatrics will meet in the Library on the first floor of the Schenley, while Urology will convene in the Sun Parlor next to the Library. After the first hour, the doors will be thrown open between the two rooms, and the remainder of the afternoon will be spent in a joint meeting. And such a program as they have arranged for this joint meeting! It really looks as though they want to attract all the audience from the other sections! But, by the comments we have heard on the programs arranged for the other sections we fancy that the members will all wish they were twins!

Thursday morning will find the sections all meeting in the rooms assigned to them, and the afternoon General Meeting will close what we predict is going to be one of the best meetings we have ever held.

THE GUEST SPEAKERS

General Sessions

Dr. Alfred W. Adson, Mayo Clinic, Rochester, Minn., is one of the well-known neurological surgeons in this country. Although a young man, by virtue of his initiative and the large amount of clinical material available at Rochester, he has established himself as a well-trained, versatile neurologic surgeon. His recent work on the sympathetic nervous system, especially as it relates to vascular disturbances, is one of the outstanding contributions to surgical progress. We are particularly fortunate in having him as one of our guest speakers at the State Society meeting in October.

Dr. L. H. Newburgh, Ann Arbor, Mich., is professor of clinical investigation in the Department of Internal Medicine of the University of Michigan Medical School. He is a teacher, a thinker, an investigator, and a physician. He has gained a wide reputation for his research work in the field of metabolism, considering chiefly the problems of diabetes, nephritis, and obesity, and has made a number of valuable contributions to the literature on these subjects. Dr. Newburgh is a physician who can associate the laboratory with the clinic. He has been able to solve his problems in the laboratory, and then to apply his results in the practice of medicine. The Committee is fortunate to secure a man of his outstanding ability as a speaker on this program.

Section on Medicine

Dr. Louis Hamman, Baltimore, Maryland, is a member of the American Medical Association, of the Society for Clinical Investigation, and of the Association of American Physicians. At the present time he is associate professor of clinical medicine at the Johns Hopkins University, and associate visiting physician at the Johns Hopkins Hospital, the Union Memorial Hospital, and the Hospital for Women, of Maryland.

Dr. Walter C. Alvarez, Rochester, Minn., for many years associate professor of research medicine at the University of California, is now at the Mayo Clinic, where he is devoting most of his time to physiologic and clinical research on problems of interest to gastro-enterologists. He is associate professor of medicine at the University of Minnesota (Mayo Foundation). He is a member of the Association of American Physicians, the American Physiological Society, the Society for Clinical Investigation, the Society for Experimental Biology and Medicine, the American Gastro-enterological Association, and the American Roentgen Ray Society.

The spirit of the Allegheny County Medical Society is wonderful. Its members and committees seem to be attempting to outdo everything that was ever done before in the way of a State Society meeting. There seems no end to their hospitable plans, and we advise our members to catch up on their sleep well before they go, for there will not be much time for sleeping in Pittsburgh!

The entertainments, the Scientific Exhibit, the Technical Exhibit, and the Woman's Auxiliary activities are all described on the following pages, so we shall only urge you here to read and see what is in store for you.

In the meantime—*don't forget to register as soon as you arrive.* The exhibits and registration desk will be grouped together in the Ballroom on the first floor of the Hotel Schenley. When you register, a membership button or a visitor's button will be given to you. Don't forget to get it and *wear* it. The button will entitle you to attendance at all functions during the convention except such as require special cards of admission. Without it you cannot secure luncheon at the University Club, and without it you cannot park on the special parking place opposite the headquarters hotel. This is important, for parking in the Schenley district will be at a premium. Your button will serve as an open sesame. Without it, doors will be closed which would open effortlessly to its magic formula. Be sure to wear it.

There are so many interesting things to tell you about. The chief social function of the meeting will be the President's Reception in the main dining hall of the University Club. Following the reception there will be a dance for all who are inclined. But we don't want to steal the thunder of the special articles which follow. Read them, and you will have some faint idea of the feast that will be spread for your delectation the first week of October. Then fling dull care away and come, though it be for only a day!

THE GUEST SPEAKERS

Section on Surgery

Dr. John J. Moorhead, New York City, professor of surgery in the New York Postgraduate School, on Tuesday, October 4th, will participate in the symposium on traumatic surgery, presenting a paper on "Injuries to the Knee Joint." Dr. Moorhead is an outstanding authority on industrial and traumatic surgery.

Dr. Jobez N. Jockson, Kansas City, Mo., president of the American Medical Association, on the same afternoon will discuss "Acute Gangrenous Retrocecal Appendicitis."

Dr. Donold C. Bolfour, Rochester, Minn., professor of surgery in the University of Minnesota Medical School and chief of surgery of the Mayo Foundation, on Wednesday, October 5th, will discuss the subject of "Gastric Ulcer."

Dr. Frank H. Lahey, Boston, Moss., chief surgeon of the Lahey Clinic, Boston, will be the guest of honor on Thursday, October 6th. His subject will be "Gastrojejunal Ulcer; its Diagnosis and Management."

Although these subjects have been much discussed in recent years, there still remain numerous debatable points. Both Dr. Balfour and Dr. Lahey are active surgeons of wide experience, frequent contributors to medical literature, and are preëminently fitted to discuss the present status of these phases of gastric surgery. They will give us the latest and best judgment on a subject upon which the last word has not yet been spoken.

Section on Dermatology

Dr. George Miller MacKee, New York City, is one of the outstanding figures in national and international dermatology. His writings on this branch of medicine have been so numerous that no important phase of it has been left without some definite contribution from his pen. His outstanding achievement, however, was the standardization of x-ray treatment as applied to skin diseases, and his book on this subject is authoritative and includes everything needed by the student practitioner and specialist. In addition, being associated with the late Dr. Fordyce for many years, he was the preceptor, teacher, and friend of many of the younger generation of the present dermatologists of this country. Dr. MacKee was responsible, as much as any one else, for the creation of one of the few postgraduate schools in this country which gives clinical and theoretical opportunities to workers in dermatology—the Vanderbilt Clinic. He was president of the American Dermatological Association during the past year. It is at the request of his students in Pittsburgh that he has honored the Section with his active participation in this program.

THE SCIENTIFIC EXHIBIT

This year the Scientific Exhibit will carry out still further the ambition to present the essential features of scientific work not possible in the sessions alone. Although it will be impossible to produce a continuous demonstration from each of the ten exhibitions, provisions have been made whereby each section will retire according to schedule to a special room, called the Demonstration Room, opening off the main exhibit, where the demonstrations can be conveniently carried out for a larger number who wish to attend. This schedule will be placarded and announced hourly throughout the convention assemblages so that all attending may be notified.

Clinical Pathologic Exhibit

The large subcommittee in charge of the Scientific Exhibit consisting of fifteen clinical pathologists and bacteriologists representing all of the hospitals in the Pittsburgh district will

guarantee a variety and abundance of fresh material together with competent demonstrations. Perhaps the greatest feature will be the demonstration of a complete autopsy.

There will also be demonstrations of serologic tests, including Kahns, Wassermanns, Lange goldsols, Widals, and the various biochemical tests. The more common bacteriologic procedures, especially microscopic preparations and dark-ground illumination for Treponema pallidum will be demonstrated.

Other fresh material available at the time will be shown, and in every case a careful clinical history will accompany the specimen. Differential diagnosis of the serologic and bacteriologic specimens presented will be stressed particularly. The main purpose of this feature is to emphasize the danger of error in technic, as well as the interpretation of apparent findings. Hourly notices will be posted and announcements will be made of special demonstrations of any subject provided by the sections, with name of demonstration, subject, and time allotted for it.

MATERNAL AND INFANT WELFARE EXHIBIT OF PENNSYLVANIA DEPARTMENT OF HEALTH

Equipment for baby care, prenatal care, paraphernalia, and accessories of maternity hygiene.

PHILADELPHIA HEART ASSOCIATION

The plan to be followed will be similar to the type of exhibit by the same association in Harrisburg two years ago.

THE GUEST SPEAKERS

Section on Eye, Ear, Nose, and Throat Diseases

Dr. John M. Wheeler, New York City, professor of eye diseases at New York University, is known personally by many of our members and by practically every ophthalmologist from his published reports of his recent work.

Dr. Harold I. Lilly, Rochester, Minn., head of the ophthalmological department of the Mayo Clinic, and equally well-known, will discuss "Purulent Chronic Otitis Media." He has been especially interested in this subject, and has made a study of it for many years.

We are fortunate to have secured two such men, each a leader in his own line of work.

Section on Pediatrics

Dr. Linnaeus Edford LaFetra, New York City, professor of pediatrics in the New York Post-Graduate Medical School, will honor the Section with a discussion on "Meningitis in Children." His association in the editing of the translation of Pfaundler and Schlossman's *Diseases of Children,* and his numerous contributions to pediatric literature well qualify him as one of the foremost pediatricians of modern times.

Dr. Henry F. Helmholz, Rochester, Minn., will discuss the subject of "Chronic Pyurias." Dr. Helmholz is professor of pediatrics at the University of Minnesota (Mayo Foundation) and head of the Section of Pediatrics at the Mayo Clinic. Because of his numerous contributions to pediatric literature and his extensive investigations of genito-urinary conditions in infancy and childhood, his name is familiar to all those interested in pediatrics, and the Section was fortunate to secure him as a speaker.

Section on Urology

Dr. Herman L. Kretschmer, Chicago, Ill., ranks as one of America's leading urologists. He was graduated from Northwestern University Medical School in 1904, and is now assistant professor of genito-urinary surgery at Rush Medical College of the University of Chicago, and urologist to the Presbyterian Hospital, Chicago. Dr. Kretschmer is a member of our highest national medical and urological associations, in which he has ever labored actively for the best interests, advancement and elevation of urology. For many years he has been deeply interested in the urology of childhood, and his personal efforts in directing the attention of pediatrists and practitioners of medicine in general to this long-neglected and fruitful field of urologic pathology, diagnosis, and treatment accredits him as a true pioneer. His address on this subject will be authoritative and representative of the latest and best in this medical specialty.

SECTION ON MEDICINE

Attendants will be present at all times to demonstrate pathologic specimens from the University of Pittsburgh.

SECTION ON SURGERY

Demonstrators will be in attendance at all times to show the application of apparatus in treatment of fracture of the femur; the technic of proctoclysis, blood transfusion, and intravenous injections; the application of wet dressings in the treatment of infections of the extremities and in the treatment of felons; and methods of applying molded plaster splints, as originally devised by Dr. J. J. Buchanan.

SECTION ON EYE, EAR, NOSE, AND THROAT DISEASES

Demonstrators will be constantly in attendance to show the technic of transillumination.

SECTION ON PEDIATRICS

Demonstrators will be in attendance at all times to explain practical preventive measures handled by representatives of the Department of Public Health of Pittsburgh.

SECTION ON DERMATOLOGY

A clinical demonstration of the differential diagnosis in some of the most common skin diseases will be presented by members of the Pittsburgh Dermatological Society, who will be in attendance from 9 a. m. to 12 m. to discuss the patients presented.

Section on Urology

Demonstrators will be in attendance at all times to present the bacteriology and clinical course of gonorrhea in the male. This exhibit will be in charge of Percy S. Pelouze and Frederick S. Schofield, Philadelphia, and emanates from the Department of Urology, School of Medicine, University of Pennsylvania. The exhibit consists of posters depicting the bacteriology, immunology, and clinical course of the disease; also of cultures and graphic charts of urine trends. The aim is to correct erroneous impressions and to bring out diagnostic points of interest to the general practitioner.

Radiograms of normal and diseased seminal vesicles will be shown by the Department of Urology and Roentgenology of the Graduate School of Medicine of the University of Pennsylvania, with Benjamin A. Thomas, Henry K. Pancoast, and Francis G. Harrison, Philadelphia, in charge. There will be an exhibit of seminal vesiculograms, normal and pathologic. Placards will depict the rôle and importance of the seminal vesicles as foci for harboring and disseminating infection probably provocative of arthritis.

A. J. Bruecken, M.D.,
Chairman Scientific Exhibit Committee.

THE STATE HEALTH DEPARTMENT EXHIBIT

The space on the main exhibition floor assigned to the State Department of Health will be equipped with desks, writing material, telephone, etc., for the convenience of the members of the State Medical Society and its visitors.

While the space allotment does not admit an extensive exhibit, compact electrical devices will set forth the outstanding landmarks of progress made by the Department in public-health work.

For twenty-one years this branch of the State government has labored to improve the sanitary conditions of Pennsylvania and reduce the incidence of communicable disease. The results accomplished are gratifying not only to the Department, but to the medical profession of Pennsylvania, through whose willing collaboration they were made possible.

Pursuant to the adopted policy of rating medical coöperation at high value, it is the earnest desire of the Secretary of Health, that there shall be a still closer affiliation between the State Department and the State doctors. Whatever the Department can contribute to the advantage and welfare of the profession, it offers through any and all of its agencies. Communications from physicians receive marked attention and their requests are promptly acted upon. In order to find out how your Department of Health may serve you, when you go to the meeting of the State Society be sure to visit its headquarters, write your letters or dictate them to a stenographer, see the exhibits, ask questions, check your packages, sit down and gossip with your friends, have a match! smoke up!

THE TECHNICAL EXHIBIT

Physicians find it hard to realize that science and commerce are partners; that where science leads, there commerce follows; that without the practical application afforded by commerce, scientific findings could not be made available for general use. But it is all true. Without scientific discoveries and inventions to exploit, commerce never could have developed; and without commerce to make the contact between producer and consumer, science would be like the Dutchman's doorbell that "don't make." Pure science is the explorer; commerce is the pioneer and consolidator that takes possession and makes habitable the new regions discovered. Without commerce, the phenomenal development of America (that name to conjure with) could never have occurred. It is the American business man no less than the American educator and the American professional man who has developed our country to a height no civilization has yet attained. He it is who has supplied the weapons with which the wilderness was conquered, and he it is who must manufacture the weapons with which disease is to be fought and health for all the nation won.

In the battle for health we are all fighting together. The physician is the advance guard, the cavalry, the infantry, the air service; commerce is the commissary department, the quartermaster's department, the ordnance department, which provides the wherewithal for the fighters.

One of the big supply depots of this vast army will be found in the ballroom of the Hotel Schenley during the meeting of the Medical Society of the State of Pennsylvania. There one of the finest collections of disease-fighting apparatus ever displayed at our annual session will be found.

Before starting for the meeting, take an inventory of your armor, your artillery, your machine guns, your airplanes—of all your fighting equipment. Has it deteriorated? You will make a poor soldier if you go into the health battle with a rusty musket of the vintage of '61. The world has moved since then; and the world has moved since you stepped out of medical college to conquer it with your scrap of parchment. You owe it to yourself, to your patients, and to the people

of the commonwealth, whose health is in your keeping, not to let your equipment—mental or physical—deteriorate.

You are alive to the necessity of constant drill—of postgraduate study, of reading the current medical literature, of attending your medical society meetings. Is it not just as necessary to keep your instruments and office equipment polished and ready for active duty when the zero hour arrives?

Suppose you were suddenly dropped on a far-off island without the thousand-and-one helps with which commerce provides you in civilized America. How much of your efficiency as a physician would you lose?

Let us, then, give commerce our thanks for her assistance, and let us take an hour or two off and study the health ordnance and ordnance stores to be found at the technical exhibit. They are brought there for your convenience, for it is the easiest way in which you can select your supplies.

Like a vast department store in which almost everything needful may be bought under one roof, medical exhibits have developed because it makes buying and selling easier when medical consumers and medical producers can be brought together in one great mart. Here, no matter whether you are a general practitioner or a specialist, you will find nearly everything needful for your practice. To give you some idea of the variety that will be on display, we list below the firms which will attend, together with many of their products.

Atomizers

The DeVilbiss Company, Toledo, O.

Blood-Pressure Apparatus

W. A. Baum Co., Inc., New York, N. Y.

Chemical, Biological, and Pharmaceutical

Abbott Laboratories, North Chicago, Ill.
The Columbus Pharmacal Co., Columbus, O.
Deshell Laboratories, Inc., Chicago, Ill.
The Gilliland Laboratories, Inc., Marietta, Pa.
The Maltbie Chemical Co., Newark, N. J.
H. A. Metz Laboratories, Inc., New York, N. Y.
Mutual Pharmacal Company, Syracuse, N. Y.
Richards, Inc., Glenolden, Pa.
E. R. Squibb & Sons, New York, N. Y.
The Zemmer Company, Pittsburgh, Pa.

Electrical Apparatus

The Engeln Electric Co., Cleveland, O.
H. G. Fischer & Co., Inc., Chicago, Ill.
Hanovia Chemical & Mfg. Co., Newark, N. J.
The Kelley-Koett Mfg. Co., Inc., Covington, Ky.
McIntosh Electrical Corporation, Chicago, Ill.
Victor X-Ray Corporation, Chicago, Ill.
Wappler Electric Company, Long Island, N. Y.

Electro-Diagnostic Instruments

Cameron's Surgical Specialty Co., Chicago, Ill.

Infant and Invalid Foods

The Dry Milk Company, New York, N. Y.
Horlick's Malted Milk Corporation, Racine, Wis.
Mead Johnson & Co., Evansville, Ind.
The Laboratory Products Co., Cleveland, O.
Mellin's Food Company, Boston, Mass.
Merrell-Soule Company, Syracuse, N. Y.
Moores & Ross, Inc., Columbus, O.

Medical Books

P. Blakiston's Son & Co., Philadelphia, Pa.
W. B. Saunders Company, Philadelphia, Pa.

Metabolism Apparatus

Sanborn Company, Cambridge, Mass.

Milk Education Service

The Holstein-Friesian Association of America, Chicago, Ill.
Pittsburgh District Dairy Council, Pittsburgh, Pa.

Mineral Water and Ginger Ale

Polar Water Co., Pittsburgh. Pa.
Kalak Water Co. of New York, Inc., New York, N. Y.

Needle Medications

Harry M. Thompson, Pittsburgh, Pa.

Pharmacist

McKennan Drug Co., Pittsburgh, Pa.

Physicians' and Hospital Equipment

Frank S. Betz Co., Hammond, Ind.
Feick Brothers Co., Pittsburgh, Pa.
The Robert A. Fulton Company, Pittsburgh, Pa.
V. Mueller & Co., Chicago, Ill.
Painter & Andrews, Pittsburgh, Pa.
The George P. Pilling & Son Company, Philadelphia, Pa.

Prescription Opticians

Street, Linder & Propert, Philadelphia, Pa.
The White-Haines Optical Co., Columbus, O.

Protective Insurance

The Medical Protective Company, Chicago, Ill.

Sterilizers

Wilmot Castle Company, Rochester, N. Y.

Surgical Instruments

Harold Surgical Corp., New York, N. Y.
Kloman Instrument Co., Inc., Washington, D. C.
E. B. Meyrowitz Surgical Instruments Co., Inc., New York, N. Y.
The Physicians Supply Co. of Phila., Philadelphia, Pa.
Harvey R. Pierce Co., Philadelphia, Pa.
Wasserott Brothers, Wilkes-Barre, Pa.

X-Ray Fracture Devices

DePuy Manufacturing Co., Warsaw, Ind.
L. G. McCutchen, M.D., St. Louis, Mo.

SOCIAL ACTIVITIES DURING THE MEETING

Aside from the medical program which has been so carefully selected, the entertainment committee has arranged and now is ready to publish a social program that will care for the odd

times during which the visiting physician can enjoy a few hours of entertainment with his family and friends. Briefly, the following social activities have been planned for the convention week:

Beginning at 10 a. m. on Monday, October 3, 1927, at a Pittsburgh country club (name to be announced later), the championship golf tournament will be held. The features of this meet are: (1) Establishment of a permanent organization. (2) Championship eighteen-hole medal competition for the Allegheny County Medical Society. (3) Championship eighteen-hole medal competition for the State Medical Society. (4) The low net trophy—the best net score in eighteen holes medal play. (5) The best selected nine holes. (6) Trophy for best gross medal play. (7) Four-men-team trophies selected from different sections. (8) Consolation trophy. Attention is called to the fact that no two prizes will be given any one person.

Dinner will be served for those wishing to remain, at which time all trophies will be presented. Entrants will kindly notify the chairman of the Golf Committee as to whether they care to remain for dinner. The entrance fee will be three dollars. Please send in all entries and notify the chairman of your club handicap at your earliest convenience.

On Monday, October 3d, at 8 p. m., a theatre party will be held at one of the new theatres of this city now near completion. This theatre, to be announced later, is one of the largest and most modern in the country, and will be formally opened during the week of the convention with a series of elaborate ceremonies ushered in by the appearance of many of the favorite motion-picture players of the country. The entertainment will consist of vaudeville, motion pictures, and the personal appearance of numerous "movie" stars. Tickets for this evening can be secured at the Registration Booth. Do not forget to get your ticket and be on hand. Bring your wife, family, and friends.

On Tuesday evening, October 4th, at the William Penn Hotel, William Penn Way, a smoker will be given for all members of the State Society. The speaker of the evening, Dr. John L. Davis, A.B., B.D., D.D., a humorist, philosopher, and thinker, through his bristling wit which runs in a strain of beautiful sound philosophy that his audience can carry home with them and keep in their hearts for many days, will be the pleasant surprise of the evening. The Allegheny County Medical Society will present a side-splitting farce on the social-service aspect of the dispensary. An evening's fun awaits this audience, and every one possible should attend to make this evening a success.

On Wednesday evening, October 5th, at 7:45, a general public meeting will be held at Soldier's Memorial Hall at Fifth Avenue and the Boulevard, directly opposite the Hotel Schenley. Morris Fishbein, M.D., editor of the *Journal of the American Medical Association* and of *Hygeia,* will present a subject of his own choice. This will be preceded by motion pictures and a feature produced by the Public Health Service. Dr. Fishbein will be introduced promptly at 8 p. m. by Dr. C. H. Henninger, president of the Allegheny County Medical Society. Because of the fact that the President's Reception and Ball will be held at the University Club at 9:30 p. m. a prompt attendance is expected at the public meeting in order that the program may be fully presented and still allow time for those desirous of attending the President's Reception.

Arrangements for section and fraternity dinners and smokers will be posted daily at the Registration Booth. Attention is called to the Information Booth, at which one thoroughly acquainted with the activities of the meeting, will be on hand to straighten out any conflicts regarding the events that may arise in the minds of the attending members of the State Society.

Attention is called to the schedule of social events for the visiting women which appears in the Auxiliary Department on page 814. Their headquarters will be situated at the Pittsburgh Athletic Association, Fifth Avenue and the Boulevard, and there will also be a booth devoted to their needs in the ballroom of the Hotel Schenley.

Members of the State Society are asked to make note of the fact that the visiting or local physicians who are not members of the University Club or the Pittsburgh Athletic Association may enjoy the privileges of these clubs by wearing or presenting the official badge of the Society which will be distributed at the Registration Booth. This includes dining-room privileges. Special club breakfasts, luncheons, and dinners have been arranged to accommodate the members of the State Society at these clubs, and no member should hesitate to avail himself or his family of these opportunities.

The Committee on Entertainments—Drs. H. G. Schleiter, *chairman;* Paul Titus, E. W. Willets, T. McMabon, B. Z. Cashman, J. H. Wagner, and C. B. Maits—will be available during the convention to assist the members of the State Society to arrange for spending the odd hours at which they are at leisure for social diversion.

L. G. Beinhauer,
Chairman Publicity Committee.

President-Elect Morgan

Arthur Caradoc Morgan, M.D., was born in Lost Creek, Schuylkill County, Pennsylvania, on November 14, 1869, of parents both of whom had emigrated from Wales. He received a common-school education, and first worked as a slate picker in the coal mines. Later he became a railroad telegrapher, and worked for the Lehigh Valley Railroad Company for several years. Pursuing a course of night study under tutors, he prepared for entrance upon the study of medicine, was matriculated in the Medico-Chirurgical College of Philadelphia on October 1, 1894, and was graduated from that institution on May 18, 1897, immediately entering the Philadelphia General Hospital (Blockley) as a resident physician, where he served for one year.

Dr. Morgan located in Philadelphia, and at once became associated with his alma mater as an instructor in medicine, continuing until the merger with the University of Pennsylvania. He remained as associate in medicine in the undergraduate department of the University for three years, and also became associate professor in medicine in the Graduate School, continuing as a member of the staff for five years, at which time he resigned to become professor of applied therapeutics in the School of Medicine of Temple University, Philadelphia—a chair he still retains. As sub-dean in medicine at the Medico-Chirurgical College for several years, he was brought into close personal contact with a large number of students. He served for eighteen months in the United States Army, and was assigned to various camps as tuberculosis examiner.

From his earliest days in medicine Dr. Morgan has devoted himself to teaching, literary reviews, and hospital association, having served as visiting physician to the Philadelphia General Hospital for nearly twenty-five years, in addition to the Frankford, Samaritan, Garrettson, and other hospitals. He is also consulting internist to the Eastern State Penitentiary.

Dr. Morgan has a remarkable memory, and it often affords amusement to his friends to hear him give the name, address, medical school year of graduation, office hours, and telephone number of nearly every physician he knows. He is popular with the alumni who studied under his direction, and is endeared to all his students, who have conferred upon him the sobriquet of "Spicy."

Dr. Morgan has been a member of the Philadelphia County Medical Society for nearly twenty-five years, has served on the board of directors, and was president of the society in 1925, when the epoch-making action of securing its own home was consummated. He was a member of the House of Delegates of the American Medical Association during the session of 1912 at Los Angeles, and has been a delegate to the Medical Society of the State of Pennsylvania for many years, always taking an active part in its transactions.

He is a member of the College of Physicians of Philadelphia, a Fellow of the American College of Physicians, a member of the Æsculapian Club of Philadelphia, the Philadelphia Clinical Association, the Physicians' Motor Club, and the Phi Rho Sigma Fraternity. He received the honorary degree of Doctor of Science from Susquehanna University in 1926. The Doctor is a member of the Methodist Episcopal Church, a Mason, and belongs to a number of other fraternal bodies. He believes thoroughly in the necessity of organized medicine, and that by the proper activities of our county societies and the observance of medical ethics the practice of the healing art will be made more pleasant and profitable.

As president-elect of the Medical Society of the State of Pennsylvania, he has visited twenty-five individual county societies, besides attending several councilor-district gatherings. He has served for several years on the Committee on Public Health Legislation, and has been of signal service to the medical profession in this respect. He will enter upon his term as president with a thorough knowledge of the organization and a wide experience in medical executive work that will enable him to guide the Society's further activities along lines of usefulness.



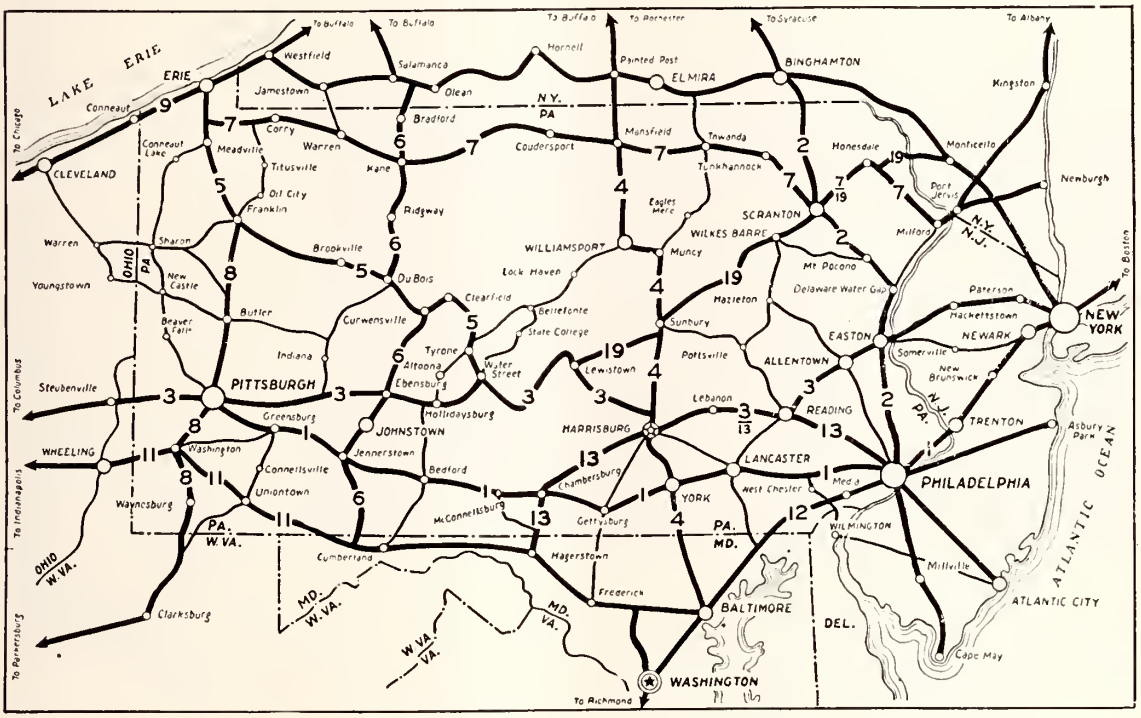
ARTHUR CARADOC MORGAN, M.D.

AUTOMOBILE ROUTES TO PITTSBURGH

Pittsburgh's location at the southwestern end of the State gives visitors to the Pittsburgh session an opportunity to tour some of the excellent as well as historic and interesting highways of Pennsylvania—from the east, the Lincoln (No. 1) and William Penn (No. 3); from the north, the Maryland to Erie highway (No. 8); and from the northeast, the Susquehanna (No. 4) and Lackawanna (No. 2) trails. All points are within moderate distance of one of these highways. For the convenience of motorists, the numbered list of highways and the map which were printed in the JOURNAL last year are reproduced in this issue.

PARKING SPACE DURING THE SESSION

Free open-air parking is furnished directly opposite the Hotel Schenley on Forbes Street to those having badges. The space is inclosed, and an attendant will be in charge all the time. The Pittsburgh Parking Garages in the business district will furnish parking and chauffeur service at all times at moderate cost. Many reputable garages are located near the place of meeting, the names of which will be obtainable at the information desk. Only those presenting the membership or visitor's buttons which will be obtained on registration will be entitled to make use of the free parking space. Be sure to register and get your button.



KEY MAP OF PENNSYLVANIA

This map of Pennsylvania and surrounding states is intended only as a key to the main trans-Pennsylvania thoroughfares and their more important connections. The numbers of the Pennsylvania main roads as shown on this map will be found along the roadside on telephone and telegraph poles; and in the majority of Pennsylvania municipalities these numbers continue as on State highways. The letters "R" and "L" found on telegraph poles under the route number indicate right or left turns. There are thirteen important trans-State highways, reaching all the important centers of population. In their numerical order these routes are as follows:

Route No. 1—The Lincoln Highway.

Route No. 2—Lackawanna Trail.

Route No. 3—William Penn Highway.

Route No. 4—Susquehanna Trail.

Route No. 5—Lake to Sea Highway.

Route No. 6—From the Maryland line, south of Meyersdale, to the New York line, north of Bradford.

Route No. 7—Roosevelt Highway.

Route No. 8—From the Maryland line, south of Waynesburg, through Pittsburgh to Erie.

Route No. 9—The Yellowstone Trail.

Route No. 11—National Pike.

Route No. 12—Baltimore Pike.

Route No. 13—Philadelphia to Chambersburg, via Reading and Harrisburg.

Route No. 19—Lewistown to Narrowsburg, via Wilkes-Barre and Scranton.

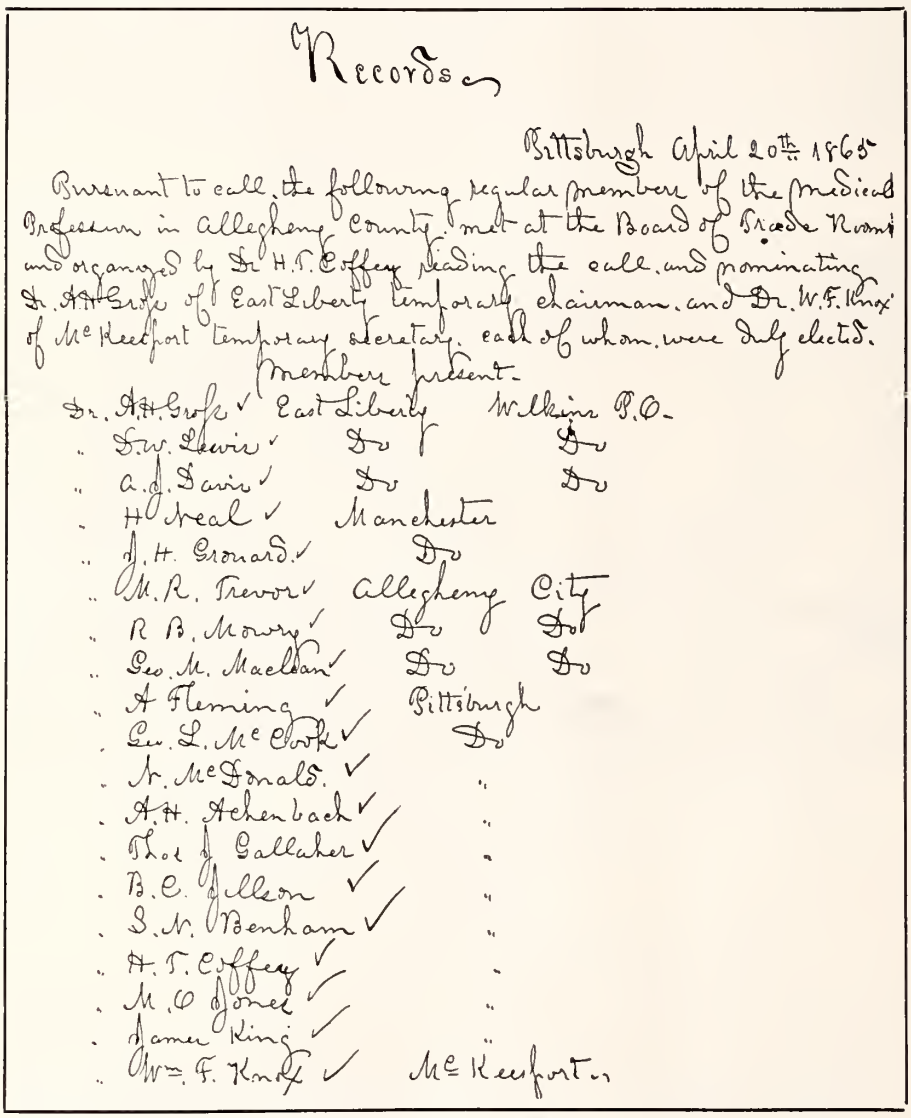
THE ALLEGHENY COUNTY MEDICAL SOCIETY

When one goes a-visiting, naturally he is interested in the host who entertains him. This year, the Allegheny County Medical Society will act as host to the State Society at its annual session. So, by way of introduction to those guests who have not before experienced the hospitality of our western constituent, we have asked Dr. L. G. Beinhauer, chairman of the publicity committee, to tell us something about the history of his society.

The present organization known as the Allegheny County Medical Society has an ancestry which is rich in traditions of its members and their activities. The names of the active members of the medical profession of 1836 attached to a printed "fee bill" dated January 1, 1836, will recall the work of such men as George D. Bruce, Jonas R. McClintock, and James R. Speer, besides that of the Vanderschlots, Richardsons, Bedfords, Brunots, and Mowrys of the earlier period (1800).

With this foundation and inspiration as a basis, the first regularly organized medical society in Allegheny County was founded about the year 1850. This society was active for about six years, when it suspended activities, but was resuscitated by the formation of the present society in the early part of 1865. The first regular meeting was held on April 20th of that year, and the first president, A. H. Gross, was duly elected at a meeting held in January, 1866. During the next ten years he was succeeded in the presidency by the following physicians: R. B. Mowry, A. M. Pollock, H. T. Coffey, H. T. Gallaher, E. A. Wood, George D. Bruce, J. C. Maginni, M. O. Jones, W. J. Asdale, and T. W. Shaw.

At the January meeting in 1876 medical examiners were appointed whose duty it was to examine all applicants for the study of medicine as to their scholastic attainments. These duties were divided among T. W. Shaw, A. M. Pollock, and B. C. Jillson. At that time it was necessary for all applicants to have a thorough knowledge of all branches of English education, a stated requirement in Latin and Greek, and some added scientific knowledge before any recognized member would attempt to in-



Records

Pittsburgh April 20th 1865

Pursuant to call, the following regular members of the Medical Profession in Allegheny County met at the Board of Trade Room and organized by Dr H.T. Coffey reading the call and nominating Dr. A.H. Gross of East Liberty temporary chairman, and Dr. W.F. King of McKeesport temporary secretary, each of whom were duly elected.

Members present.

Dr. A.H. Gross ✓	East Liberty	Wilkins P.O.
" Sam. Lewis ✓	Do	Do
" A.J. Davis ✓	Do	Do
" H. Neal ✓	Manchester	
" J.H. Conard ✓	Do	
" M.R. Trevor ✓	Allegheny City	
" R.B. Mowry ✓	Do	Do
" Geo. M. Maclean ✓	Do	Do
" A. Fleming ✓	Pittsburgh	
" Geo. L. McCook ✓	Do	
" N. McDonald ✓	"	
" A.H. Achenbach ✓	"	
" Thos J. Gallaher ✓	"	
" B.C. Jillson ✓	"	
" S.M. Benham ✓	"	
" H.T. Coffey ✓	"	
" M.O. Jones ✓	"	
" James King ✓	"	
" Wm. F. Kneff ✓	McKeesport	

Reproduction of the record of the initial meeting of the present Allegheny County Medical Society, April 20, 1865.

struct the applicant in the science of medicine.

The object of the society, as taken from the constitution, was the advancement of knowledge upon all subjects connected with the healing art, the organization of the profession in connection with the State Medical Society and the American Medical Association, the elevation of the character and the protection of the proper rights and interests of those engaged in the practice of medicine, and the study of means calculated to render the medical profession most useful to the public and subservient to the great interests of humanity. The society made rapid progress, and attained instant recognition and success. About 1876, its members numbered 140 physicians in good standing and representative of the most prominent regular physicians of that time in Allegheny County. A list of the officers from that date down to the present includes the names of many of the most brilliant and representative medical men of the county.

When one considers the firm foundation that has been laid by our preceptors in medicine, there is little wonder that the present society has achieved a place of rank and importance in the state and national medical circles. True to the tradition which has been handed down to it, and proud of its ancestry, the present Allegheny County Medical Society has advanced hand in hand with the medical legislation and progress in which it has played an important part. Today the younger generation of physicians have realized the necessity of continuing the work of the founders, and many of its present members occupy offices of importance in state and national societies, demonstrating their sense of duty for the carrying on of the charge which has been willed to them by generations of self-sacrificing ministrants to the common weal.

After sixty-three years of such service to humanity, the Allegheny County Medical Society, the representative of ethical medicine and the recognized voice of the profession, endeavors to safeguard the public, its health and its interests. To these ideals the society has devoted itself, and to the prevention of disease and prolongation and improvement of human life it has dedicated itself. Its sole purpose is to serve the profession and the community.

Its membership, guided by these principles, has gradually increased to the grand total of 1,272 physicians who are practicing medicine in Allegheny County. At present, the society is enjoying a wave of prosperity, and its destinies are guided by C. H. Henninger, president; A. H. Gross, vice-president; A. H. Colwell, secretary; and R. L. Anderson, treasurer.

With such a tradition and inheritance behind it, there is every reason to believe that the present members of the Allegheny County Medical Society will leave no stone unturned to make the coming convention an occasion never to be forgotten by those who are fortunate enough to be their guests.

Data for this article were obtained from "The History of Allegheny County of Pennsylvania 1753-1876." L. H. Everts Co., Philadelphia, 1876.



The first three presidents of the Allegheny County Medical Society—A. H. Gross, 1865-66; R. B. Mowry, 1867; A. M. Pollock, 1868.

COMMITTEES OF THE ALLEGHENY COUNTY MEDICAL SOCIETY

For the 1927 Session

General Committee

Robert L. Anderson, *Chairman*
Fred M. Jacob, *Secretary*

C. H. Henninger
A. J. Boucek
A. W. Duff
C. A. Duffy
E. W. Day
T. L. Disque
Charles G. Eicher
W. A. Forster
L. C. Fausold
W. H. Gardner
George A. Holliday
D. R. Jacobs
Robert H. Jeffrey
Zoe Allison Johnston
J. C. Kelly
G. W. Lang
G. C. McMaster
Thomas Manley, Jr.
Thomas A. Miller
John F. McCullough
Thomas E. McMurray
S. A. Norris
N. F. Phillips
L. Z. Rubenstein
A. H. Stewart
Thomas Snowhite
Thomas St. Clair
Charles K. Shaner
Thomas G. Simonton
W. A. Womer
Jefferson H. Wilson
Ralph W. Walker

ADVISORY COMMITTEE

W. H. Mayer, *Chairman*

E. B. Heckel — J. J. Buchanan
Lawrence Litchfield — Walter F. Donaldson

PUBLICITY COMMITTEE

L. G. Beinhauer, *Chairman*

J. J. Lee — Lester Hollander
A. R. Hampsey — Harold J. Byron

SCIENTIFIC EXHIBIT COMMITTEE

A. J. Bruecken, *Chairman*

Samuel Haythorn — F. W. Joyce
H. H. Permar — Moses Baker
G. Scullard — K. Yardumian
J. M. Cohen — E. P. Vandergrift
George R. Lacy — John Ballagi
J. W. McMeans — R. H. McClellan
J. Rockman — Harry Markowitz
T. R. Helmbold



C. H. HENNINGER,
President of the Allegheny County Medical Society, 1927-28.

COMMITTEE ON HOTELS

I. H. Alexander, *Chairman*

E. S. Montgomery — C. K. Wagener
S. C. Milligan — A. M. Milligan

ENTERTAINMENT COMMITTEE

H. G. Schleiter, *Chairman*

Paul Titus — B. Z. Cashman
E. W. Willetts — J. H. Wagner
Thomas McC. Mabon — C. B. Maits

INFORMATION COMMITTEE

A. H. Gross, *Chairman*

James Hodgkiss — Homer E. Halferty
William Shapera — E. C. Boots
E. W. Jew — Milton Jena
J. A. O'Donnell — D. A. Ressa
F. X. Straessley

COMMITTEE ON PUBLIC MEETING

J. A. Lindsay, *Chairman*

H. E. McGuire — A. H. Colwell
J. P. Kerr — H. E. Dewalt

GOLF COMMITTEE

G. J. McKee, *Chairman*

H. A. Miller — Stanley Ecker
C. H. Aufhammer — T. G. Grieg

AUTOMOBILE COMMITTEE

C. C. Marshall, *Chairman*

C. N. Schaefer — M. A. Bradford
C. M. Thomas — J. A. Munster

PROGRAM

TWENTY-SECOND ANNUAL CONFERENCE OF SECRETARIES

Tuesday, October 4, 1927, 5: 30 P. M.

HOTEL HENRY
PITTSBURGH

Chairman, Henry G. Munson, Secretary Philadelphia County Medical Society.

Secretary, John M. Beck, Secretary Huntingdon County Medical Society.

SUBJECT

The four reasons set forth in our official application blank why every qualified physician should unite with a county medical society.

1. Because it unites the representative men of the medical profession.
   WALTER F. DONALDSON, *Secretary* Medical Society of the State of Pennsylvania (5 minutes).
   Discussion to be opened by GEORGE E. DESCHWEINITZ, Philadelphia.

2. Because of its postgraduate work.
   WILTON H. ROBINSON, Pittsburgh, *Chairman*, Postgraduate Committee, Allegheny County Medical Society (5 minutes).
   Discussion to be opened by MORRIS FISHBEIN, Chicago, Editor of *Journal of the American Medical Association*.

3. Because of its service in advancing and conserving the corporate interests of its membership.
   CHARLES B. AMBROSE, *Secretary* Westmoreland County Medical Society (5 minutes).
   Discussion to be opened by EDWARD B. HECKEL, Pittsburgh.

4. Because of its altruistic interest in improved public health.
   JOSEPH J. MEYER, *Secretary* Cambria County Medical Society (5 minutes).

Discussion to be opened by PRESIDENT HARRY W. ALBERTSON, Scranton.

(The Hotel Henry is located in downtown Pittsburgh, just around the corner from the William Penn Hotel, where the smoker given by the Allegheny County Medical Society will be held.)

DINNER, 6:45 P. M.

Address.

JABEZ N. JACKSON, *President* American Medical Association.

(Dinner reservations should be made at the Registration Desk before 3 p. m., Tuesday, October 4. Component society secretaries and officers of the State Society, $1.00 per plate. Other members of the State Society will be welcome at $2.50 per plate.)

HOTEL ACCOMMODATIONS FOR THE MEETING

The visiting physician should make his hotel reservations at the earliest moment if he has not already done so. Although the hotels are sufficient in number to accommodate all who attend the meeting, it will be necessary that a few make reservations at the downtown hotels during the coming convention. Those hotels available have submitted rates which are quoted under the hotels as listed.

Hotel Schenley, the official headquarters for the session, is located opposite Schenley Park, occupying the area between Forbes Street and Fifth Avenue. This hotel has already reserved all possible accommodations at the present writing, and can offer nothing further in the line of reservations.

Webster Hall, situated at Fifth and Bellefield Avenues, within a few blocks of the meeting place, is a bachelor hotel, and offers:

	Daily	*Weekly*
Single room with bath	$4.00	$21.00
Double room with bath	6.00	30.00
Single room with running water	2.50	15.00
Single room with running water	3.00	17.00
Double room with running water	4.00	21.00

All rooms have running water, club showers are on each floor, and every room is an outside room.

Downtown are located many of Pittsburgh's larger hotels at which reservations can be made.

The *William Penn Hotel*, situated at William Penn Way, Oliver and Sixth Avenues, and Grant Street, offers the following rates per day:

	Outside Rooms	*Court Rooms*
Single room with shower		$4.00-$5.00
Single room with tub bath	$7.00-$8.00	4.50- 5.50
Double room with shower		6.50
Double room with tub bath	8.00-11.00	7.50
Double room with tub bath and twin beds	11.00-12.00	7.50

If desired, an extra cot bed will be placed in a room, for which an additional charge of $2.00 will be made. Accommodations for about 250 people can be obtained at this hotel.

The *Fort Pitt Hotel*, located at Penn Avenue and Tenth Street, within a stone's throw of the Union Station (P. R. R.) has listed the daily rates as:

	Single Rooms	*Double Rooms*
Without bath	$2.50-$3.00	$4.00
With bath	3.50- 5.00	5.00-$8.00
With twin beds and bath		7.00-10.00

This hotel has accommodations for about five hundred people.

The *Hotel Henry*, directly opposite Kaufmann's Department Store, at Fifth Avenue and Smithfield Street, quotes the following rates per day:

	Single Rooms	*Double Rooms*
Without bath	$2.50	$4.00
With bath	3.50	5.00-$7.00

This hotel has accommodations for about 250 people.

Located on Liberty Avenue near Seventh is the *Seventh Avenue Hotel*, an old landmark in Pittsburgh, which is available for reservations at the following prices per day:

	Single Rooms	*Double Rooms*
Without bath	$2.00-$3.00	$4.00-$5.00
With bath	3.50- 4.00	6.00

This hotel has accommodations for about two hundred people.

Farther downtown, on Penn Avenue near Stanwix Street, and opposite the Jenkins Arcade Building, is a smaller family hotel, the *Hotel Chatham*, at which about 125 rooms are available. The rates per day are:

	Without Bath	*With Bath*
Single rooms	$2.50-$3.00	$3.50-$5.00
Double rooms	4.00	5.00- 7.00
Twin beds—two persons	4.50	
three persons	4.50	
four persons	5.00	

Facing along the Monongahela River, directly opposite Mt. Washington hillside, at Water and Smithfield Streets, is Pittsburgh's oldest hotel—the *Monongahela House*, which will accommodate about two hundred people. The rates per day are:

	Single Rooms	*Double Rooms*
Without bath	$2.00	$3.50
With bath	3.00	4.00-$6.00

POSTSCRIPT

See the editorial, "Postscript," on page 793 for Dr. Fishbein's comment on the scientific program. Also for the program of Surgical Demonstrations at the Scientific Exhibit.

The Woman's Auxiliary of the Medical Society of the State of Pennsylvania

MRS. SAMUEL BOLTON, *Editor*
4701 Leiper Street, Philadelphia, Pa.

CALL TO THE THIRD ANNUAL MEETING

The third annual meeting of the Woman's Auxiliary of the Medical Society of the State of Pennsylvania will be held in Pittsburgh, October 3 to 6, 1927. Headquarters and meetings will be in the Pittsburgh Athletic Club, Fifth Avenue and the Boulevard, diagonally across from the Hotel Schenley, which is headquarters for the Medical Society. There will also be a registration and information booth for the members of the Auxiliary and visiting women in the Ballroom on the first floor of the Schenley.

Following is the program planned for the week's activities:

MONDAY, OCTOBER 3D

5:30 p. m.—Executive Board Dinner at the Pittsburgh Athletic Association.
7:30 p. m.—Theater party for Delegates and their visitors.

TUESDAY, OCTOBER 4TH

9:30 a. m.—Meeting of House of Delegates in the State Room of the Athletic Association. Open to all visiting women.
2:00 p. m.—Entertainment in the Ballroom of the Athletic Association. Music by local talent, and talk by Dr. John L. Davis, of New York.
8:00 p. m.—Entertainment in Ballroom of the Athletic Association. Costume readings and music.

WEDNESDAY, OCTOBER 5TH

9:30 a. m.—General session in the State Room of the Athletic Association. Open to all visiting women.
2:00 p. m.—Drive starting from the Athletic Association. Tea at the summer home of Dr. and Mrs. E. B. Heckel.
7:45 p. m.—Public meeting in Soldiers' Memorial Hall, across Fifth Avenue from Hotel Schenley.
9:30 p. m.—President's reception and Ball at the University Club.

THURSDAY, OCTOBER 6TH

11:00 a. m.—Drive starting from the Athletic Association. Luncheon and bridge party at the Pittsburgh Field Club, where the entire afternoon will be spent.
Meeting of the new Executive Board at the call of the Chair.

The business meeting in the previous program you will find full of interest and help. We ask that you be prompt in attendance. The social program speaks for itself. The Allegheny County Auxiliary has worked diligently, and its members will prove themselves most gracious hostesses. A good time is in store for all who come.

SUSAN F. B. (MRS. J. NEWTON) HUNSBERGER,
President.
KATHARINE K. (MRS. H. C.) PODALL,
Corresponding Secretary.

THE FELLOWSHIP OF MAN

MRS. DAVID B. LUDWIG
PITTSBURGH, PA.

From Genesis we learn that "it is not good for man to live alone." Since the beginning man has been a social creature. At first this grouping of individuals was instinctive rather than from choice. Men hunted in bands in order to avoid the dangers of marauding animals, to which the individual hunter was exposed. Women and children sought a common fire for warmth and protection from the enemies of darkness. So it was that, out of a chaos of unformed desires, indefinite thought, and the unexplainable gropings of a beginning intelligence, social life of the human race had its birth.

Throughout the history of man we see him planning his life, not as an individual but as one of a group. In the "Golden Age," when life was still a very simple and primitive existence, the tendency was for human beings to organize themselves into kinship bands, the kinship being based on the relation of the mother to the child.

As the race of men increased and life became more complicated, we find men separating from the larger band and forming smaller groups, not with the idea of safety of numbers so much as because of a developing preference of the individual for those of congenial tastes and ideas.

To this preference we can trace the beginning of organization, society, and club. The early Christians living and holding services in the catacombs of Rome were probably among the pioneers of an organized society. Down through time, the society has come, reaching its greatest power only when formed of groups whose ideas and ideals are similar, and whose interchange of thought promotes the growth and interest of the minds of men and women who compose the group.

The society reaches its highest development when composed of individuals professionally interested in the growth of the arts and sciences of the age. To this group belongs the medical society. Because of the distribution of the race and because of the dependence of the individual upon the service of the medical profession, the physician is probably more isolated than men in any other profession or walk of life; and be-

cause of his consecration to the cause of humanity, he possibly gains an insight into the lives of men and makes discoveries of such vast import to life that a meeting of these men is a necessity, not only to themselves, but also that humanity may gain that which has been revealed through the minds of these men whose work goes hand in hand with God.

This year, Pittsburgh, the Allegheny County Medical Society, and its Auxiliary are proud to have the annual meeting of the Medical Society of the State of Pennsylvania within our city. And with the members of the State Society we are proud to greet the wives, daughters, mothers, and sisters of physicians who will attend this meeting.

The women's program for the meeting begins on Monday evening, October 3, with an executive board dinner at the Pittsburgh Athletic Association at 5:30, followed by a theater party for delegates and their visitors.



THE PITTSBURGH FIELD CLUB

On Tuesday morning at 9:30 the Auxiliary House of Delegates will meet in the State Room of the Athletic Association. It will be called to order by Mrs. J. Newton Hunsberger, president of the State Auxiliary, followed by an invoca-

tion. Dr. Charles H. Henninger, president of the Allegheny County Medical Society, will deliver the address of welcome. The response by Mrs. Hunsberger will be followed by the regular order of business—reports of standing and special committees and reports of county auxiliaries.

At 2 p. m. there will be an entertainment in the Ballroom of the Athletic Association. Members of the Allegheny County Auxiliary who are also numbered among the musically talented women of Pittsburgh, will furnish a musical program. Dr. John L. Davis of New York, of whom it has been said "Through his bristling wit runs a strain of beautiful sound philosophy that his audience can carry home with them and keep in their hearts many days," will be with us during the afternoon, and we shall have the opportunity of hearing the nationally known "witty oratorical wizard."

Tuesday evening's entertainment, featuring Mrs. A. W. Sherrill in costume in a three-act period dramatic reading, and Mrs. J. LeRoy Foster, violinist, accompanied by Miss Janet Marshall at the piano, will be given at 8 o'clock in the Ballroom of the Athletic Association.

Wednesday morning at 9: 30 the general session of the Woman's Auxiliary will meet in the State Room of the Athletic Association. Brief addresses will be given by Dr. Harry W. Albertson, president, and Dr. Arthur C. Morgan, president-elect of the State Medical Society. There will be an address by Mrs. Allen K. Bunce, president-elect of the National Auxiliary, and a report of the delegate to the national meeting at Washington, D. C. Awarding of prizes for *Hygeia* subscriptions, and installation of new officers will complete the morning session.

All meetings and entertainments are open to visitors, and prompt attendance is urged. You will find much of interest in both sessions.

At 2 p. m. we shall start from the Pittsburgh Athletic Association for a drive to the summer home of Dr. and Mrs. E. B. Heckel, where tea will be served.

At 8 p. m. there will be a meeting open to the public, to be held in the Soldiers' Memorial Hall. As members of the laity most closely related to the members of the Medical Society, this meeting should loom vast in importance in this week of medical activities to the women who visit the convention. From the Public Meeting to the President's Reception and Ball in the University Club at 9: 30 p. m. is a short step. There will be the joy of meeting old friends and renewing under the most pleasant circumstances, acquaintances formed at previous meetings.

Thursday will be Party Day at the Pittsburgh Field Club. This is one of Pittsburgh's beauty spots. On the way out we pass the city filtration plant and its acres of filter beds, Pittsburgh's contribution to the elimination of typhoid fever. Farther on, to the right of the road, on a hillside stands the new Veteran's Hospital. On the left, adjoining the Field Club, are the buildings of the Shady Side Academy. Roger's Field, one of our landing stations, lies just over another hill, and fair day or gray, the planes are seen zooming and diving overhead. Leaving the Pittsburgh Athletic Association at 11 o'clock, the drive will terminate at the Field Club for lunch, and then we settle down to an afternoon of progressive bridge.

Thursday will end our week, and another epoch in our lives. We shall have lived, learned, and loved, and let us hope that we shall also have become banded together in a closer "Fellowship of Man," which is based on congeniality of ideals.

ACTIVITIES OF OTHER STATE AUXILIARIES

Colorado.—A column of *Colorado Medicine,* written by Mrs. Frank B. Stephenson, is devoted to the meeting of the National Auxiliary in Washington. To quote: "At a most interesting meeting the state presidents gave their reports, and the diversity of interests in the states was striking. Some had formed study clubs to inform themselves about their health laws, some investigated their milk and water supplies, two had aided flood sufferers, one was assisting a medical student, some were interesting women's clubs in a better-health movement, some did charitable work, and one had published an issue of its state's medical society journal, making a nice sum for itself in doing so. All were interested and active in increasing the circulation of *Hygeia.* Pennsylvania is supreme in number of members."

Georgia.—The third annual meeting was held in Athens, Ga., May 10th to 13th. The membership is 604, and has nearly doubled since last year. The membership of Fulton County alone is 268.

Oklahoma.—*The Journal of the Oklahoma State Medical Association* publishes a three-page story of the Washington meeting written by Mrs. Walter Hardy, of Ardmore. Mrs. Hardy is to be congratulated on her article. She seemed to sense the spirit, not only of the Auxiliary meeting, but also of the scientific endeavors and the social aspect of the American Medical Association. This is a splendid example of the benefits to be gained by making the medical society a "family affair."

South Carolina.—This State Auxiliary is devoting itself to raising funds for the Sims Memorial. Each county auxiliary is asked to raise $100. The counties are also asked to appoint publicity chairmen, and to see that they send in their reports every month. The Auxiliary is also expected to further the cause of preschool examination of children, to help the State and county health nurses to break down the barriers of ignorance and indifference, and to aid in the campaign to "put South Carolina back in the vital-statistics zone." At a meeting of the Greenville County Auxiliary each member responded to roll call with the name of a surgeon. An effort is being made to put *Hygeia* in every

school, doctor's office, and public library before the new year.

West Virginia.—This State Auxiliary has a membership of 201, and held its third annual meeting on June 21st. The public-health program of the State was an important subject discussed, and the members were urged to take a more active part in public-health work. It was decided to send a delegate to the public-health meeting at Wheeling. The Auxiliary went on record as sponsoring the movement for a home for the feeble-minded in West Virginia.

All the state auxiliaries are pushing subscriptions to *Hygeia*, and Mrs. McReynolds, the new president of the National Auxiliary, is offering a cash prize to the state sending in the greatest number of subscriptions during the year.

County Society Reports

JEFFERSON—JULY

A joint meeting of the Jefferson, Indiana, Clarion, and Clearfield County Medical Societies was held at the Country Club at Punxsutawney at noon on June 9th. Dinner was served by the wives and daughters of the Punxsutawney members. There were 75 members of the four societies present. Dr. S. M. Beyer presided, first introducing Dr. John C. Alexander, of Pittsburgh, who gave a talk on "Acute Conditions of the Upper Abdomen," stressing perforated ulcer, hemorrhage from ulcer, acute hemorrhagic pancreatitis, and gall-stone colic. He was followed by Dr. A. C. Morgan, of Philadelphia, president-elect of the State Society, who talked first on the relationship of the county medical society and its individual members to State legislation, and then delivered an address on "Acute Cardiac Tragedies."

Dr. J. B. F. Wyant, of Kittanning, councilor of the district, discussed the relationship of members of the profession to the public and to the State. Dr. Kahle, of Clarion, a member of the State Senate, gave those present an insight on the difficulties of protecting the public from the cultists.

W. A. HILL, M.D., Secretary.

LYCOMING—JUNE-JULY-AUGUST

Dr. Edward J. Klopp, Associate in Surgery, Jefferson Medical College, addressed the Society at its meeting on June 10th. His subject was "Peptic Ulcer." Dr. Klopp classified ulcers as perforating, obstructive, and chronic. In the chronic types, gastro-enterostomy is the choice in the vast majority of cases, while partial gastrectomy is useful in some cases. The perforating type may be subdivided into three classes; viz., acute, subacute, and chronic. In the acute case the onset is sudden, the pulse is slow and full during the first couple of hours, and the contents escape down the mesentery towards the lower right quadrant into the pelvis. About 50 per cent of these patients vomit. In the subacute, the opening soon seals, while in the chronic perforating type the patient is sometimes never operated on for the perforation. But the tendency to subdiaphragmatic abscess exists and ultimately surgery is required. One frank hemorrhage seldom demands operation. The usual time for operation is about five weeks after the hemorrhage.

In acute hemorrhagic pancreatitis, the patient is in shock as distinguished from acute perforating ulcer. There is also less rigidity. In the treatment of acute perforation, the opening should be closed, and a gastro-enterostomy done if possible. If advanced peritonitis exists, a jejunostomy should be done. A gastro-enterostomy must not be done without demonstrating an ulcer. The opening should be fairly close to the pylorus—not at the most dependent point. Excessive jejunal mucous membrane should not be excised, as it should be used to cover the line of suture. Linen is best for the serous suture, and catgut for the mucous membrane.

The postoperative treatment and complications and the differential diagnosis between gastric ulcer and carcinoma were considered. Following the discussion on Dr. Klopp's paper, films on "Gastric Ulcer" were shown.

The scientific program of the July meeting, held on July 8th, consisted of a symposium on "Hay Fever and Bronchial Asthma."

Dr. Ferd E. Weddigen (Williamsport): Sensitization and Laboratory Diagnosis.—The earliest test for bronchial asthma was made in 1910. Sensitization is a comparatively new discovery. The history will give some idea as to the causative group, as aspiratory, alimentary, or bacterial. Powdered protein may be applied to an abrasion of the skin, and if a positive result obtains, the reaction is present in five or six hours. Nearly every protein has an almost characteristic reaction. The dose of the protein given for desensitization is important—an overdose accomplishing nothing, and often causing anaphylaxis. One ten thousandth of a grain of white of an egg is sufficient for desensitization. Extremely small doses are best in desensitization, and should be given over a long time. In hay fever, the technic of skin tests is about the same. The seasonal element here is important.

Dr. Irvin T. Gilmore (Picture Rocks): Hay Fever and Bronchial Asthma in Aults.—These two conditions are very much the same in principle, but differ in their manifestations. In bronchial asthma, the cause, as in hay fever, is due to allergens producing hypersensitiveness. Cardiorenal disease, cardiac disease, and tuberculosis also produce bronchial asthma. Exposure to cold, etc., may bring on an attack after the case has been previously established. Eighty-five per cent of cases of bronchial asthma are allergic; the remainder are probably bacterial or due to focal infection. Food asthma is important—the reaction beginning in the mouth and pharynx, followed by intestinal upsets and skin reactions. Drugs such as quinin and salicylates often produce the condition. Removal of foci of infection, as the tonsils and gall bladder, often terminates a case of bronchial asthma. As to treatment, adrenalin is often used. Morphin and atrophin are necessary for bad attacks. Ephedrin is useful. Climate is important only in those cases due to conditions existing in that locality. Autogenous vaccines are useful in the bacterial cases. Specific causes demand their separate treatment.

In hay fever, the manifestations are principally in the upper respiratory tract. Pollens are the greatest cause, emanations from animals and bacteria accounting for a lesser number of cases. The seasonal element is of the greatest value in diagnosis and etiology of this condition. Adrenalin is useful as a temporary benefit in these cases. Gross pathology in the nose and throat should be removed. Extracts of pollen antigen should be injected six weeks before the attack is supposed to commence, and should be repeated yearly for prophylaxis.

Dr. Robert K. Rewalt (Williamsport): Hay Fever and Bronchial Asthma in Children.—Heredity plays an

important rôle in bronchial asthma. Recurrent infections are the exciting cause, though no germ has been isolated as specific. Most children suffering with bronchial asthma are neurotic, and this factor is important in bringing on the attack. Eosinophilia is usually present except in children. Three to ten minims of adrenalin is useful. Ephedrin by mouth is frequently very good. Inhalants from croup kettles sometimes bring relief. Hay fever in children under twelve years of age is rare. Desensitization is the treatment. Adrenalin, ephedrin, and benzyl benzoate may be used to relieve temporarily. The prognosis of bronchial asthma in children is much better now than in previous years.

Dr. P. H. Decker (Wiliamsport): The Nose and Paranasal Sinuses as an Etiologic Factor.—Vasomotor rhinitis is included in this group of cases. The etiology is an underlying neurosis. Sedatives and vacations help these people sometimes. In some cases the mucous membrane is hypersensitive, and local measures, such as cocain, silver nitrate, cautery, or the quartz lamp help to toughen the tissues, regenerate the mucous membrane, and prevent the attacks. Mechanical causes, as pressure on turbinates, should be corrected, although operation does not always bring about a cure. Bacterial infection in the sinuses is probably a cause of bronchial asthma in an occasional case. It certainly does have a definite relation, and the clearing up of an infection in the antrum often cures a case.

Dr. L. M. Hoffman: Foreign body in the respiratory tract produces symptoms similar to bronchial asthma. Some form of auto-intoxication causing reflex disturbance of the endocrines may sometimes be shown as the basic cause of bronchial asthma. The ultraviolet ray is beneficial in the bacterial cases.

Dr. W. N. Shuman: Abnormal secretion of the adrenals may bring about a predisposition to bronchial asthma and hay fever.

Dr. C. D. Voorhees: Lobelia has relieved most cases in my experience.

The August meeting held on the 12th was the annual picnic and outing. About eighty members of the society met during the forenoon at the Lamp Creek Fish and Game Club, twenty miles northwest of Williamsport, and after dinner, participated in trapshooting, quoit contests, cards, and other amusements.

W. E. DELANEY, JR., M.D., Reporter.

SOMERSET—JULY

The society met in its yearly "outing" session on July 19th in the grove on the Zimmerman farm overlooking the Quemahoning dam that supplies water to the city of Johnstown. The attendance was less than anticipated.

The morning was devoted to greetings and sports, followed by a luncheon. At the business session held in the afternoon Dr. Fred B. Shaffer was elected delegate to the State Society, with Drs. H. A. Zimmerman and M. U. McIntyre as alternates. Dr. Arthur E. Crow, of Uniontown, the councilor of the district, detailed some experiences of a recent trip to Europe. He was particularly impressed by the small number of inmates in the fine European hospitals, and said that many of our county hospitals treat more patients. He followed these remarks by a paper on the glandular system.

H. C. MCKINLEY, M.D., Secretary.

TIOGA—JULY-AUGUST

The Society met July 22d at the Community Building, Elkland, with Dr. Frisbie, vice-president, in the chair. There were twenty-three members present.

Dinner was served at 7 o'clock, followed by a musical program. The guest of the evening was Dr. Donald Guthrie, surgeon-in-chief of the Robert Packer Hospital, Sayre, who addressed the meeting on "The Cardinal Symptoms in the Diagnosis of Duodenal Ulcer."

The August meeting was held Friday evening, the 5th, at the Blossburg Hospital. This meeting was held in honor of the president and president-elect of the Medical Society of the State of Pennsylvania, Drs. Harry W. Albertson, of Scranton, and Arthur C. Morgan, of Philadelphia.

Sixty-one physicians and friends attended—twenty-four from Tioga County, twenty-two from Lycoming, six from Potter, five from Bradford, one from Sullivan, and one each from Philadelphia, Scranton, and Syracuse.

Dr. L. G. Cole, surgeon of the Blossburg Hospital, entertained those present at dinner, after which the meeting was called to order at 8 o'clock by Dr. W. S. Brenholtz, councilor of the Seventh District. Following several selections by a male quartet, Dr. Albertson was introduced and gave a talk on some matters pertaining to the State Society, emphasizing particularly the benefits of the Medical Benevolence Fund and the manner in which the income from the fund is distributed. He made a strong appeal to those present for voluntary contributions to this fund. Dr. Morgan delivered a very instructive address on "The Treatment of Acute Cardiac Tragedies." The addresses were followed by several more musical selections, after which the meeting adjourned.

S. P. HAKES, M.D., Reporter.

UNION—JULY

The quarterly meeting of the Union County Medical Society was held in the Buffalo Valley Inn, Mifflinburg, on July 21st, where dinner was served. The attendance was remarkably good. Dr. Walter S. Brenholtz, Williamsport, councilor of the district, and Dr. Russel, of Toronto, were guests.

Dr. Mary Wolfe, superintendent of the Laurelton State Village for the feeble-minded, gave a most interesting talk on the management of that institution. The charges entrusted to her care are first taught to read, write, and compute sufficiently to take care of their earnings. Responsibility to others and to the community is taught by a scheme of self-government with wonderful results. An effort is made to stabilize the mental attitude of her wards. Such as are susceptible are paroled in a proper environment, and frequently make good.

Dr. Brenholtz gave the formula for a good mental diet well calculated to nourish an undersized, poorly developed, listless county medical society. His remarks were so well received that it looks as though the society will go forward to a greater life, if not enthusiasm. Let us hope both!

CHARLES H. DIMM, M.D., Reporter.

THE MEDICAL SOCIETY

OF THE STATE OF PENNSYLVANIA

OFFICIAL TRANSACTIONS

Seventy-Seventh Annual Session

CALL TO THE 1927 SESSION

The first meeting of the 1927 House of Delegates will be held in the French room, second floor of the Hotel Schenley, Pittsburgh, on Monday, October 3, 1927, at 3 p. m.

In addition to the election of the usual officers whose terms will expire at that time, the House will be called upon to elect three Trustees, including a successor to Dr. Frank G. Hartman, of Lancaster, to fill the unexpired term of Dr. Theodore B. Appel, Dr. Hartman having been appointed in the interim by the Board of Trustees when Dr. Appel resigned to become Director of the Department of Health of the Commonwealth of Pennsylvania.

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Ralph L. Hill, Woodville.
Lloyd L. Thompson, 305 E. Eighth Ave., Homestead.
Morris A. Slocum, Highland Bldg.

*The offset names are the alternates, and where street address only is given, the name of the city follows the name of the county.

†Deceased.

Ernest W. Willetts, Diamond Bank Bldg.
Frank H. Rimer, 1200 Chislett St.
David B. Ludwig, 1119-1121 Highland Bldg.

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Ralph W. Walker, 417 Savings Bank Bldg.
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Samuel G. Logan, Ridgway.

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Frederick A. Fetherolf, 941 Hamilton St.
Mark A. Bausch, 235 N. Twelfth St.
William J. Hertz, 125 N. Eighth St.

LUZERNE COUNTY (WILKES-BARRE)

George R. Drake, 135 W. Main St., Plymouth, President.
Edward W. Bixby, 292 S. Franklin St., Secretary.
Samuel P. Mengel, 181 S. Franklin St.
Lewis Edwards, 792 Market St., Kingston.
Gordon E. Baker, 1250 Wyoming Ave., Forty Fort.
Samuel M. Wolfe, 218 S. Franklin St.
Peter P. Mayock, 43 S. Washington St.
Nathaniel Ross, 434 S. Franklin St.
William J. Doyle, 558 Hazel Ave.
Augustine C. Trapold, Jr., 239 S. Washington St.
William J. Davis, 225 Barney St.

LYCOMING COUNTY (WILLIAMSPORT)

John B. Nutt, 430 Pine St., President.
Walter S. Brenholtz, 151 E. Third St., Secretary.
J. Gibson Logue, Larrivee Bldg.
Joseph W. Albright, Muncy.
Warren N. Shuman, Jersey Shore.
John A. Campbell, Newberry Station.
George R. Drick, 21 W. Fourth St.
P. Harold Decker, First National Bank.

MCKEAN COUNTY

Howard K. Eaman, Bradford, President.
Persis Straight-Robbins, Bradford, Secretary.
Francis De Caria, Bradford.
Lawrence W. Dana, Kane.
Samuel R. Huff, Eldred.

MERCER COUNTY

Robert W. Brown, Greenville, President.
Edith MacBride, Sharon, Secretary.
Edith MacBride, Sharon.
Patrick E. Biggins, Sharpsville.
George W. Kennedy, Dollar Title and Trust Bldg., Sharon.

MIFFLIN COUNTY

Henry E. Miller, Belleville, President.
James A. C. Clarkson, Lewistown, Secretary.
Thomas H. Smith, Burnham.
Charles J. Stambaugh, Reedsville.
Henry W. Sweigart, Lewistown.

MONROE COUNTY

Paul H. Shiffer, Stroudsburg, President.
Walter L. Angle, East Stroudsburg, Secretary.

MONTGOMERY COUNTY

J. Elmer Gotwals, Phœnixville, President.
Edgar S. Buyers, Norristown, Secretary.
Herbert A. Bostock, Norristown.
W. Cole Davis, Norristown.
Winfred J. Wright, Skippack.
J. Newton Hunsberger, Norristown.
William C. Sheehan, Erdenheim.
Henry D. Reed, Pottstown.

MONTOUR COUNTY

Edward B. Shellenberger, Danville, President.
John H. Sandel, Danville, Secretary.
Robert A. Keilty, 1801 Eye St., N. W., Washington, D. C.
Edward B. Shellenberger, Danville.
Cameron Shultz, Danville.

NORTHAMPTON COUNTY (EASTON)

Frank J. Hahn, Bath, President.
Theodore Reichbaum, 724 Northampton St., Secretary.
William L. Estes, 805 Delaware Ave., Bethlehem.
Herbert J. Schmoyer, 203 E. Broad St., Bethlehem.
Victor S. Messinger, 253 Bushkill St.
Clinton F. Stofflet, Pen Argyl.
Cardinal C. McCormick, Pen Argyl.
David H. Keller, Bangor.

NORTHUMBERLAND COUNTY (SHAMOKIN)

George G. Reese, Shamokin, President.
Charles H. Swenk, Sunbury, Secretary.
Horatio W. Gass, 910 Market St., Sunbury.
Michael T. Flanagan, 307 N. Shamokin St.

PERRY COUNTY

Charles E. Delancy, Newport, President.
A. Russell Johnston, New Bloomfield, Secretary.
William T. Morrow, Loysville.
J. E. Book, Newport.

PHILADELPHIA COUNTY (PHILADELPHIA)

Frederick S. Baldi, 2117 Porter St., President.
Henry G. Munson, S. E. Corner Twenty-first and Spruce Sts., Secretary.
John W. Croskey, 21st & Chestnut Sts.
John H. Remig, 805 S. 12th St.
Damon B. Pfeiffer, 1822 Pine St.
T. Turner Thomas, Central Medical Bldg.
John F. Roderer, 2426 N. Sixth St.
William H. Good, 5415 Rising Sun Ave., Olney.
William B. Scull, 3024 Richmond St.
Elmer H. Funk, 1318 Spruce St.
William N. Johnson, 6430 Germantown Ave.
Henry G. Munson, S. E. Corner, 21st & Spruce Sts.
John A. O'Connell, 2128 Pine St.
W. R. Watson, 1524 Chestnut St.
Francis F. Borzell, 4910 Frankford Ave.
Samuel A. Savitz, 2031 Pine St.
Clement R. Bowen, 752 S. Sixtieth St.
Mary M. Spears, 2049 Chestnut St.
Frederick S. Baldi, 2117 Porter St.
Arthur J. Zimlick, 12th & Spruce Sts.
J. Ralston Wells, Medical Arts Bldg.
R. Powers Wilkinson, 1613 S. Broad St.
D. Clinton Guthrie, 722 N. Fortieth St.
William N. Bradley, 1725 Pine St.
Maurice J. Karpeles, 146 W. Chelten Ave.
Harry B. Wilmer, 138 W. Walnut Lane.
J. Norman Henry, 1906 Spruce St.
Eugene C. Murphy, 1841 S. Broad St.
James P. Mann, 1234 Spring Garden St.
Moses Behrend, 1738 Pine St.
Paul B. Cassidy, 2037 Pine St.
Thomas M. Armstrong, 1815 S. Broad St.
Orlando H. Petty, 1803 Pine St.
William C. Ely, 3912 Chestnut St.
Russell S. Boles, Rittenhouse Plaza.
George A. Knowles, 4812 Baltimore Ave.
Harold W. Jones, 1426 Spruce St.
Aaron L. Bishop, 5324 Vine St.
F. Hurst Maier, 2019 Walnut St.
Marion H. Rea, 141 Montgomery Ave., Cynwyd.
Collin Foulkrod, 3910 Chestnut St.
Howard Leon Jameson, 250 S. Seventeenth St.
Stanley Q. West, 6312 Sherman St.
L. Waller Deichler, Central Med. Bldg.
John A. Kolmer, Cynwyd (Montgomery Co.).
G. Mason Astley, 824 Stock Exchange.
Francis J. McCullough, 1009 S. Forty-seventh St.
Christian G. Yaeger, Chelten Ave., Oak Lane Park.
Irving W. Hollingshead, 123 S. Eighteenth St.
Harry C. Fish, 200 N. Fiftieth St.
Seth A. Brumm, 818 Stock Exchange Bldg.
C. Howard Moore, 1729 Spruce St.
Francis Heed Adler, 313 South Seventeenth St.
Jeannette H. Sherman, 1524 Medical Arts Bldg.
Rose Hirschler, 1831 Chestnut St.
John Hancock Arnett, 269 S. Twenty-first St.
Joseph C. Doane, Philadelphia Gen. Hospital.
Louis Edeiken, 1923 Spruce St.
Percy Starr Pelouze, 812 Medical Arts Bldg.
Ralph E. Getelman, 2011 Chestnut St.
Samuel Ellis, 6203 Elmwood Ave.
Frederick C. Smith, 6247 Haverford Ave.
Sigmund S. Greenbaum, 1714 Pine St.
Walter S. Cornell, 1919 Cherry St.
Louis D. Englerth, 4912 Frankford Ave.

POTTER COUNTY

Dwight C. Hanna, Port Allegany, President.
Ross H. Jones, Coudersport, Secretary.
John H. Page, Austin.
Ross H. Jones, Coudersport.
James T. Hurd, Galeton.

SCHUYLKILL COUNTY

John Rhoads, Ringtown, President.
Arthur B. Fleming, Tamaqua, Secretary.
T. Lamar Williams, Mt. Carmel.
George O. O. Santee, Cressona.
J. Spencer Callen, Shenandoah.
James B. Heller, Pottsville.
Jerome B. Rogers, Pottsville.
Edward McDowell, Pottsville.

SNYDER COUNTY

Percy E. Whiffen, McClure, President.
John O. Wagner, Beaver Springs, Secretary.
Russell W. Johnston, Selinsgrove.
Jerome Herman, Middleburg.

SOMERSET COUNTY

Milton U. McIntyre, Boswell, President.
H. Clay McKinley, Meyersdale, Secretary.
Fred B. Shaffer, Somerset.
George F. Speicher, Rockwood.
Milton U. McIntyre, Boswell.

SULLIVAN COUNTY

Martin E. Herrmann, Dushore, President.
Philip G. Biddle, Dushore, Secretary.
Justin L. Christian, 3632 Rutherford St., Harrisburg (Dauphin Co.).
George C. Swope, Mildred.
Carl M. Bradford, Canton (Bradford Co.).

SUSQUEHANNA COUNTY

George W. Newman, Springfield, President.
Edward R. Gardner, Montrose, Secretary.

TIOGA COUNTY

D. Ritchie, Mansfield, President.
Solomon P. Hakes, Tioga, Secretary.
D. S. Brazda, Blossburg.
Grover A. Meikle, Lawrenceville.
Henry M. Hagedorn, Westfield.

Union County

Charles H. Dimm, Mifflinburg, President.
John W. Arbogast, Lewisburg, Secretary.
Harry R. Thornton, Lewisburg.
John W. Arbogast, Lewisburg.

Venango County

Calvin M. Wilson, Franklin, President.
P. Emery Huth, Franklin, Secretary.
Joseph Aaronoff, Oil City.
Carm Y. Detar, Oil City.

Warren County (Warren)

Erwin S. Briggs, 32 Water St., President.
Hugh R. Robertson, 418 Third Ave., Secretary.
Edwin S. Africa, 304 Liberty St.
John W. Hamilton, 106 Pennsylvania Ave.

Washington County

J. Frank Donahoo, Washington, President.
Charles C. Cracraft, Claysville, Secretary.
William D. Martin, Dunn's Station, R. D. 2.
James H. Corwin, Washington.
Russell W. Wolfe, Taylorstown.
Jonathan R. Day, Claysville.
Larry D. Sargent, Washington.
William J. L. McCullough, Washington.

Wayne County

Edward W. Burns, Honesdale, President.
Alfred H. Catterall, Hawley, Secretary.
Harry L. Masters, White Mills.
Edward Otto Bang, South Canaan.
Sarah Allen Bang, South Canaan.

Westmoreland County

Harry J. Stockberger, Slickville, President.
Charles D. Ambrose, Ligonier, Secretary.
Walter M. Bortz, Greensburg.
Lawrence Blackburn, Greensburg.
Paul G. McKelvy, Greensburg.
Stephen W. Nealon, Latrobe.
Winfield S. Bell, Latrobe.
Jack H. Hamill, Latrobe.

Wyoming County

Frank J. Austin, Laceyville, President.
Herbert L. McKown, Tunkhannock, Secretary.
William W. Lazarus, Tunkhannock.

York County (York)

Elmer S. Stambaugh, 658 W. Market St., President.
Pius A. Noll, 117 S. George St., Secretary.
John A. Melsheimer, Hanover.
Curtis J. Hamme, Dover.
Horace M. Alleman, Hanover.
Charles H. May, 1207 N. George St.
Oscar A. Delle, York New Salem.
Clarence W. Frey, Dallastown.

REPORTS OF OFFICERS

REPORT OF THE SECRETARY

To the President and House of Delegates:

Membership

The total paid membership August 17, 1926, was 7,492; the total paid membership August 17, 1927, was 7,600, with the following component society distribution for 1926 and 1927 respectively: Adams County 26, 27; Allegheny County 1,272, 1,286; Armstrong 53, 54; Beaver 84, 86; Bedford 16, 17; Berks 131, 135; Blair 94, 102; Bradford 39, 36; Bucks 69, 64; Butler 56, 55; Cambria 148, 162; Carbon 31, 26; Center 25, 24; Chester 70, 75; Clarion 26, 25; Clearfield 65, 64; Clinton 23, 22; Columbia 36, 34; Crawford 45, 47; Cumberland 36, 35; Dauphin 164, 165; Delaware 103, 112; Elk 21, 23; Erie 129, 144; Fayette 127, 123, Franklin 52, 53; Greene 29, 27; Huntingdon 36, 34; Indiana 57, 57; Jefferson 52, 50; Juniata 11, 9; Lackawanna 211, 228; Lancaster 135, 144; Lawrence 67, 66; Lebanon 33, 35; Lehigh 112, 117; Luzerne 274, 278; Lycoming 107, 111; McKean 37, 36; Mercer 73, 73; Mifflin 28, 27; Monroe 15, 15; Montgomery 150, 155; Montour 24, 28; Northampton 136, 136; Northumberland 67, 65; Perry 15, 16; Philadelphia 2,062, 2,050; Potter 14, 14; Schuylkill 142, 158; Snyder 6, 6; Somerset 47, 49; Sullivan 6, 6; Susquehanna 19, 19; Tioga 31, 29; Union 15, 12; Venango 52, 53; Warren 45, 43; Washington 131, 137; Wayne 26, 29; Westmoreland 156, 155; Wyoming 12, 10; York 126, 130.

During the year we lost one hundred and twenty-five members by death, seventeen by removal, and twenty-nine by resignation.

Eight societies show no change in membership; thirty, a gain; twenty-five, a loss. The following counties show a splendid increase in membership for the year: Allegheny, Cambria, Delaware, Erie, Lackawanna, Lancaster, and Schuylkill.

The present splendid position of most of our component societies reflects great credit upon their respective secretaries. On March 31st of this year, twenty-five of our sixty-three component societies had collected and remitted 1927 dues of all their members. The present highly satisfactory state of solidarity existent between our State Society and the members of its component societies can be attributed largely to lines of communication maintained by efficient county society secretaries, editors of county society bulletins, activities of councilors, and numerous and frequent visitations by the president and the president-elect of our Society.

Medical Defense

Approved applications for defense against suits for alleged malpractice since September 1, 1926, total six, numbering from 185 to 190, inclusive:

Case No. 185.—Summons served November 2, 1926. Application dated November 8, 1926. Alleged failure to diagnose and properly treat dislocation of shoulder joint.

Case No. 186.—(See below.)

Case No. 187.—Summons served February 9, 1927. Application signed March 8, 1927. Alleged failure to diagnose and properly treat dislocation of hip joint.

Case No. 188.—Summons served February 1, 1927. Application dated February 2, 1927. Alleged negligence in treatment of Colles's fracture.

Case No. 189.—Threatening letter from attorney received April 5, 1927. Application dated April 7, 1927.

Case No. 190.—Summons served April 15, 1927. Application dated April 15, 1927. Alleged failure properly to diagnose foreign body embedded in eye, resulting in ultimate loss of said eye.

The following cases have been closed during the past year:

Case No. 173.—Application dated September 10, 1924. Alleged enucleation of eye without consent. Judgment of *non-pros* entered against plaintiff.

Case No. 181.—Application dated October 3, 1925. Plaintiff alleged bad result subsequent to improper treatment of simple fracture of right tibia and fibula. Case closed by a compulsory nonsuit. Our check to the attorney for the defense for services rendered was accompanied by a letter from the Board of Trustees thanking the attorney for his initiative and enterprise in preparing the case for the defense and his comprehensive report of the proceedings. The files for this,

which might well be called a model case, contain a copy of the defense attorney's advance plans for the conduct of the case and questions propounded to defense witnesses in rehearsal before the trial. Our defendant member, in expressing his gratitude to the Society for the successful conduct of his defense, paid tribute to the many members of his county medical society and the committee of council who assisted in the case.

CASE No. 186.—Summons served November 4, 1926. Application dated December 29, 1926. Negligence alleged in treatment of leg for fracture of tibia and fibula. Case ended when the court directed the jury to give a verdict in favor of the defendant.

A review of the above brief recital of approved applications for defense will strikingly emphasize the *absolute necessity* for our members requiring x-ray examinations when called in attendance on cases where fracture, dislocation, or foreign-body injuries may materialize. Members are therefore reminded that the secretaries of all component societies are provided with x-ray release blanks to be used in *all* cases where x-ray pictures advised by the attending physician are for any reason not obtainable.

An important factor in the origin of many suits for alleged malpractice is herewith quoted from the February, 1927, JOURNAL:

ORIGIN OF DAMAGE SUITS

The attorney retained by the State Society to conduct the defense in one of our recently completed malpractice cases made the following statement in his final report: "It might be said that during cross-examination the plaintiff disclosed that it was consultation with Dr. Blank, after he had ceased to consult the defendant, which resulted in Dr. Blank's taking the plaintiff (the defendant's former patient) to an x-ray specialist, who later wrote the instructions to the plaintiff's attorney in preparation of his statement of claim." The case in question was one in which the plaintiff had a good functional result following fracture of tibia and fibula. The x-ray negative, however, as frequently happens, disclosed seeming evidence of apparently faulty apposition, which, through the unethical, disloyal connivance of a fellow physician, resulted in the institution of a suit for alleged malpractice against one of our members. The instance is cited as specific evidence that many suits for alleged malpractice have their origin in thoughtless or malicious remarks made by physicians to the patients or the friends of patients of other physicians.

Financial Report

GENERAL FUND

Balance on hand Sept. 1, 1926		$7,460.34
RECEIPTS		
Membership Allotment (7,696 members, inc. 96 members for 1926)	$32,631.49	
Journal	11,286.93	
Transferred from Medical Defense and Medical Benevolence Funds for investment	6,391.13	
Commercial Exhibit	6,043.75	
Reimbursement from Medical Benevolence Fund for vouchers Nos. 81, 181, 259	1,732.26	
Rents	1,380.00	
Reimbursement from Medical Defense Fund for vouchers Nos. 5, 146, 174, 254	995.62	
Medical Society of Delaware, Subscriptions to Atlantic Medical Journal for 1926 and 1927	594.00	
Interest on deposits	223.37	
Merck & Co. Reprints	113.06	
Periodic Health Examination Blanks	91.00	
Miscellaneous	17.43	
		$61,500.04
		$68,960.38
DISBURSEMENTS		
Publishing Journal and Official Transactions	$21,123.41	
Salaries, exclusive of Editor's	10,665.05	
Investments	12,869.22	
Annual Session	5,977.58	
Transfer of Funds	2,727.88	
Reimbursement Petty Cash Funds: Journal Office 1,145.30; Secretary's Office 375.36	1,520.66	
Standing Committees, except Scientific	981.85	
Officers' Travel and Expense	935.53	
230 State St., Harrisburg, taxes, repairs, insurance	848.39	
Stationery & Supplies	441.25	
Rent	360.00	
Reporting Tristate and Chiropractic Hearing	182.07	
Printing Constitution & By-Laws, membership blanks, insert-Medical Benev. Fund	149.73	
Reprints for Merck & Co.	100.06	
Bonding officers	93.75	
Miscellaneous	66.81	
		$59,043.24
Balance on hand Sept. 1, 1927		$9,917.14

GENERAL FUND—SPECIAL ACCOUNT

Balance on hand Sept. 1, 1926	$10,612.08	
Interest to April 25, 1927	428.72	
		$11,040.80

ENDOWMENT FUND

Balance on hand Sept. 1. 1926	705.68	
RECEIPTS		
Interest on investments	600.00	
Interest on deposits	23.41	
Transferred from General Fund (net income from rents)	212.26	
		1,541.35
DISBURSEMENTS		
For investment	none	
Balance on hand Sept. 1, 1927		1,541.35

MEDICAL DEFENSE FUND

Balance on hand Sept. 1, 1926	2,544.46	
RECEIPTS		
Interest on investments	$1,731.25	
Interest on depos.ts	74.13	
From membership allotment	779.88	
		$5,129.72
DISBURSEMENTS		
For investment	$2,496.27	
Transferred to General Fund in payment of vouchers Nos. 5, 146, 174, 254	995.62	
		3,491.89
Balance on hand Sept. 1, 1927		$1,637.83

MEDICAL BENEVOLENCE FUND

Balance on hand Sept. 1, 1926	$4,111.64	
RECEIPTS		
Interest on investments	$1,604.75	
Interest on deposits	127.51	
From membership allotment	4,978.63	
Contributions: Huntingdon, Lancaster and Northumberland County Medical Societies: Drs. W. J. Armstrong, W. W. Babcock, M. V. Ball, Moses Behrend, J. A. C. Clarkson, B. M. Dickinson, Walter F. Donaldson, W. E. Egbert, H. L. Foss, R. B. Greer, A. H. Gross, Donald Guthrie, H. H. Hare, E. B. Heckel, August Keck, D. J. McCarthy, Thomas McCrae, H. E. McGuire, C. C. Mechling, Arthur Miltenberger, Harry W. Mitchell, Henry K. Pancoast, Orlando F. Petty, R. K. Rewalt, George E. deSchweinitz, William T. Sharpless, Ira G. Shoemaker, Harvey F. Smith, Lever F. Stewart, Lewis H. Taylor, H. I. Vankirk, S. J. Waterworth, E. A. Weisser, C. S. Wilson, J. H. Wilson, Woman's Auxiliary	1,630.00	
		$12,452.53
DISBURSEMENTS		
For investment	$3,894.86	
Transferred to General Fund in payment of vouchers Nos. 81, 181, 259	1,732.26	
		5,627.12
Balance on hand Sept. 1, 1927		$6,825.41

DISBURSEMENTS

1926

Order No.		
1.	Oct. 5, by cash, William T. Sharpless, Councilor, expense account	$36.03
2.	Oct. 5, by cash, Swinston Co., buttons and badges	129.90
3.	Oct. 5, by cash, Louis Weber & Son, gavel for President	23.24
4.	Oct. 5, by cash, Mary S. Blair, reimbursement Petty Cash Fund	300.00
5.	Oct. 5, by cash, William A. Challener, services in medical defense case No. 173	75.00
6.	Oct. 5, by cash, Evangelical Press, bal. due Sept. Journal	631.63
7.	Oct. 5, by cash, Mary S. Blair, Oct. salary ..	196.66
8.	Oct. 5, by cash, Hyacinth Beard, Oct. salary .	125.00
9.	Oct. 5, by cash, Mae Andrews, Oct. salary	100.00
10.	Oct. 5, by cash, Helen Adams, Oct. salary	80.00
11.	Oct. 5, by cash, Jenkins Arcade Co. Oct. rent..	30.00
12.	Oct. 5, by cash, J. B. Lowman, B. & L. Investment, Endowment Fund	100.00
13.	Oct. 12, by cash, Bellevue-Stratford Hotel, Rental, Oct. 11-14, refreshments—President's Reception, watchmen, labor on signs, etc., telephone, balance on Secretaries' Conference dinner, luncheon for President A. M. A.	1,456.90
14.	Oct. 12, by cash, Williams, Brown & Earle, Inc., stereopticons for 1926 Session	160.00
15.	Oct. 12, by cash, Fred M. Bickhardt, orchestra for President's Reception	149.00
16.	Oct. 12, by cash, Hen. Johnston, Inc., erecting commercial exhibit	693.95
17.	Oct. 12, by cash, H. E. Willis Bland, erecting scientific exhibit booths	255.78
18.	Oct. 12, by cash, Miss F. E. Dillan, advance payment on reporting Eye, Ear, Nose and Throat Section	75.00
19.	Oct. 12, by cash, The Rosenbaum Co., trunk for Sec'y.'s office	12.95
20.	Oct. 12, by cash, American Surety Company of New York, premium on Treasurer's and Secretary's honds	50.00
21.	Oct. 12, by cash, John L. Pomering, printing registration blanks	14.00
22.	Oct. 12, by cash, Frank C. Hammond, reimbursement for amount paid to Arnold & Davis, Phila. for reporting Third Tristate Medical Conference	75.60
23.	Oct. 12, by cash, Mrs. W. G. Schooley, registration clerk	15.50
24.	Oct. 12, by cash, Mrs. M. H. Morris, registration clerk	20.00
25.	Oct. 18, by cash, Evangelical Press, program folders and official program	613.83
26.	Oct. 18, by cash, James H. Baldwin, expense account, Com. on Sci. Work	17.00
27.	Oct. 18, by cash, Peter Reilly Co., refund on exhibit space released	55.00
28.	Oct. 18, by cash, Walter F. Donaldson, exp. account, annual session	60.00
29.	Oct. 18, by cash, Ida L. Little, exp. account registration desk	66.73
30.	Oct. 19, by cash, Mary S. Blair, exp. account, at 1926 session	85.86
31.	Oct. 19, by cash, Hyacinth Beard, exp. account, 1926 session	43.99
32.	Oct. 19, by cash, Mae Andrews, exp. account, at 1926 session	42.81
33.	Oct. 19, by cash, A Graeme Mitchell, exp. account, Guest Pediatric Section	65.00
34.	Oct. 19, by cash, A. S. Warthin, exp. account, speaker, General Meeting	75.00
35.	Oct. 19, by cash, Evangelical Press, Benevolence Fund insert in Oct. Journal	35.00
36.	Oct. 25, by cash, Arnold & Davis, reporting Pediatric Section	76.53
37.	Oct. 25, by cash, Francis C. Wood, exp. account, guest, General Meeting	17.00
38.	Oct. 25, by cash, Howard T. Karsner, exp. account, guest, Medical Section	45.08
39.	Oct. 25, by cash, Horace H. Jenks, exp. account, Com. Sci. Work	8.60
40.	Oct. 25, by cash, Elliott B. Edie, Sec'y.'s Expense, Com. on Public Relations	5.19
41.	Oct. 25, by cash, Jenkins Arcade Co., Nov. rent	30.00
42.	Oct. 25, by cash, F. E. Dillan, bal. reporting General Meetings and Section on Eye, Ear, Nose and Throat Section	119.24
43.	Nov. 3, by cash, Irene H. Snyder, reporting House of Delegates and Medical Section	310.00
44.	Nov. 3, by cash, Progressive Press, printing stationery	109.00
45.	Nov. 3, by cash, Master Reporting Co., reporting Dermatologic Section	24.67
46.	Nov. 3, by cash, Edward Francis, exp. account, speaker, Section on Medicine	17.00
47.	Nov. 3, by cash, O. H. Perry Pepper, reimbursement, mimeographed program of clinics—Medical Section	4.40
48.	Nov. 3, by cash, Evangelical Press, Oct. Journal	1,294.08
49.	Nov. 3, by cash, Donald Guthrie, Chairman Finance Com. B. of T., for investment in bonds for Benevolence and Defense Funds	$6,391.33
50.	Nov. 3, by cash, Mary S. Blair, Nov. salary ..	208.33
51.	Nov. 3, by cash, Hyacinth Beard, Nov. salary ..	133.33
52.	Nov. 3, by cash, Mae Andrews, Nov. salary	108.33
53.	Nov. 3, by cash, Helen Adams, Nov. salary	80.00
54.	Nov. 3, by cash, Jenkins Arcade Co., Dec. rent ..	30.00
55.	Nov. 3, by cash, J. B. Lowman, Treasurer, B. & L. investment, Endowment Fund	100.00
56.	Nov. 3, by cash, Fred D. Weidman, Reimhursement exp. account guest, Section on Dermatology,	8.00
57.	Nov. 3, by cash, Fred D. Weidman, exp. account Scientific Exhihit	76.07
58.	Nov. 3, hy cash, Mary S. Blair, honorarium as per action of Board of Trustees	500.00
59.	Nov. 3, by cash, Nelson S. Weinberger, exp. account, Com. on Sci. Work	54.00
60.	Nov. 3, by cash, Christian B. Longenecker, Asst. Secy., exp. account, 1926 session	4.50
61.	Dec. 1, by cash, Evangelical Press, Nov. Journal	1,575.19
62.	Dec. 1, by cash, Mrs. M. C. Repp reporting Surgical Section	105.00
63.	Dec. 1, by cash, Joseph & Kline Inc., insurance on furniture, 230 State St.	7.32
64.	Dec. 1, by cash, U. S. National Bank, postage and insurance on bonds purchased	3.42
65.	Dec. 1, by cash, John L. Pomering, printing triplicate recpts., etc.	143.00
66.	Dec. 1, by cash, George L. Tobey, exp. account, speaker, Specialties Section	34.30
67.	Dec. 1, by cash, Conrad Berens, exp. account, speaker, Specialties Section	15.00
68.	Dec. 1, by cash, Mary S. Blair, advance on acct. mgrs. expense, 1927 Session, and hal. due same 1926 Session	100.00
69.	Dec. 1, by cash, Evangelical Press, 5,000 envelopes Journal office	27.50
70.	Dec. 1, by cash, J. B. Lowman, Treasurer, B. & L. investment—Endowment Fund	100.00
71.	Dec. 1, hy cash, Frank C. Hammond, Editor, quarterly salary	625.00
72.	Dec. 1, by cash, Walter F. Donaldson, Secretary, quarterly salary	625.00
73.	Dec. 1, by cash, John B. Lowman, Treasurer, quarterly salary	62.50
74.	Dec. 1, by cash, Helen Adams, Dec. salary	85.00
75.	Dec. 1, by cash, Mary S. Blair, Dec. salary	208.33
76.	Dec. 1, by cash, Mae Andrews, Dec. salary ..	108.33
77.	Dec. 1, by cash, Hyacinth Beard, Dec. salary ..	133.33
78.	Dec. 1, by cash, Ida L. Little, quarterly salary ..	120.00
79.	Dec. 1, by cash, Jenkins Arcade Co., Jan. rent	30.00
80.	Dec. 1, by cash, B. J. Myers, legal counsel quarterly salary	75.00
81.	Dec. 1, by cash, E. B. Heckel, Treas. Medical Benev. Fund, interest-to-date	771.67
82.	Dec. 20, by cash, Harnies & Salsbury, additnl. premium Compensation Ins.	1.89
83.	Dec. 20, by cash, Cotterell Company, desk, Hbg. office	76.80
84.	Dec. 20, by cash, Harry W. Mitchell, Travel Exp., meeting B. of T.	27.34
85.	Dec. 20, by cash, Evangelical Press, 1,000 letterheads, etc., Journal office	25.75
86.	Dec. 20, by cash, John L. Pomering, letters, Com. on Sci. Work	32.00
87.	Dec. 20, by cash, Evangelical Press, binding 2 volumes At. Med. Journal (Com. on Archives)	6.18
88.	Dec. 20, by cash, Frank C. Hammond, Editor—travel expense	100.00
89.	Dec. 20, hy cash, Office Equipment Co., steel shelving, Hbg. office	86.66
90.	Dec. 20, by cash, Walter F. Donaldson, Secretary, travel exp., meeting B. of T.	27.00
91.	Jan. 5, hy cash, E. C. Rauch, plumbing, 230 State St.	29.23
92.	Jan. 5, by cash, Mary S. Blair, reimbursement Petty Cash Fund	259.26
93.	Jan. 5, by cash, Walter F. Donaldson, Secy., reimbursement Petty Cash Fund	182.86
94.	Jan. 5, by cash, Mary S. Blair, Jan. salary ..	208.33
95.	Jan. 5, by cash, Hyacinth Beard, Jan. salary ..	133.33
96.	Jan. 5, by cash, Mae Andrews, Jan. salary	108.33
97.	Jan. 5, by cash, Helen Adams, Jan. salary	85.00
98.	Jan. 5, by cash, J. B. Lowman, Treas., B. & L. investment, Endowment Fund	100.00
99.	Jan. 5, by cash, Jenkins Arcade Co., Feb. rent ..	30.00
100.	Jan. 5, by cash, U. S. Nat. Bank, rent safe deposit box	4.50
101.	Feb. 1, Evangelical Press, Dec. Journal	1,599.40
102.	Feb. 1, Pennsylvania State Chamber of Commerce, Dues 1927	25.00
103.	Feb. 1, I. N. Franklin, drawing floor plans, Hotel Schenley	42.00
104.	Feh. 1, Evangelical Press, Jan. Journal	1,326.89
105.	Feh. 1, Evangelical Press, billheads, statements, Journal office	23.50
106.	Feb. 1, J. B. Lowman, Treasurer, B. & L. investment, Endowment Fund	100.00
107.	Feh. 1, by cash, Mary S. Blair, Feh. salary ..	208.33
108.	Feh. 1, hy cash, Hyacinth Beard, Feh. salary ..	133.33
109.	Feb. 1, by cash, Mae Andrews, Feb. salary	108.33

Order No.		
110.	Feb. 1, by cash, Helen Adams, Feb. salary	$85.00
111.	Feb. 1, by cash, Jenkins Arcade Co., March rent	30.00
112.	Feb. 1, by cash, Walter F. Donaldson, Secretary, travel exp., two trips Hbg.	54.00
113.	Feb. 2, by cash, Robert L. Anderson, exp. account, Com. on Sci. Work	27.00
114.	Feb. 10, by cash, Stanley Smith, exp. account, Com. on Sci. Work	27.00
115.	Feb. 10, by cash, W. W. G. Maclachlan, exp. account, Com. on Sci. Work	27.00
116.	Feb. 10, by cash, Harry W. Mitchell, exp. account, meeting Board of Trustees	27.34
117.	Feb. 10, by cash, B. A. Thomas, exp. account, Com. Sci. Work	6.15
118.	Feb. 10, by cash, Fred. E. Ross, exp. account, Com. on Sci. Work	41.91
119.	Feb. 10, by cash, Evan W. Meredith, exp. account, Com. on Sci. Work	27.00
120.	Feb. 10, by cash, Evangelical Press, printing Constitution & By-laws	99.58
121.	Feb. 10, by cash, Evangelical Press, printing mailing labels	8.50
122.	Feb. 10, by cash, Joseph V. Klauder, exp. account, Com. on Sci. Work	9.00
123.	Feb. 10, by cash, Lester Hollander, exp. account, Com. on Sci. Work	27.00
124.	Feb. 18, by cash, H. A. Mackey, Atty. fee	500.00
125.	Mar. 1, by cash, James F. McCoy, Legislative Bulletin	25.00
126.	Mar. 1, by cash, Thomas G. Simonton, exp. account, Com. on Sci. Work	28.00
127.	Mar. 1, by cash, Zaccheus R. Scott, exp. account, Com. on Sci. Work	27.00
128.	Mar. 1, by cash, George A. Knowles, exp. account, Com. on Public Health Legislation	10.05
129.	Mar. 1, by cash, Mary R. Martin, stenographer Commission on Compensation Laws	56.62
130.	Mar. 1, by cash, James C. Burt, exp. account, Com. on Sci. Work	20.00
131.	Mar. 1, by cash, Evangelical Press, printing, annual session	32.50
132.	Mar. 1, by cash, Mary S. Blair, March salary	208.33
133.	Mar. 1, by cash, Hyacinth Beard, March salary	133.33
134.	Mar. 1, by cash, Mae Andrews, March salary	108.33
135.	Mar. 1, by cash, Helen Adams, March salary	85.00
136.	Mar. 1, by cash, Ida L. Little, quarterly salary	120.00
137.	Mar. 1, by cash, Walter F. Donaldson, quarterly salary	625.00
138.	Mar. 1, by cash, J. B. Lowman, quarterly salary	62.50
139.	Mar. 1, by cash, Frank C. Hammond, quarterly salary	625.00
140.	Mar. 1, by cash, B. J. Myers, quarterly salary	75.00
141.	Mar. 1, by cash, J. B. Lowman, B. & L. investment Endowment Fund	100.00
142.	Mar. 1, by cash, Jenkins Arcade Co., April rent	30.00
143.	Mar. 1, by cash, Evangelical Press, Feb. Journal	1,412.80
144.	Mar. 1, by cash, Mary S. Blair advance Acct. Manager's expense 1927 Session	100.00
145.	Mar. 1 by cash, Mary S. Blair, reimbursement Petty Cash Fund	182.74
146.	Mar. 1, by cash, Hice, Morrison, May & Bradshaw, Attys., Medical Defense case No. 181	350.00
147.	Mar. 15, by cash, Robert F. Ridpath, exp. account, Com. on Sci. Work	28.00
148.	Mar. 15, by cash, J. T. Bretz, City Treas., City tax, 230 State St.	145.53
149.	Mar. 15, by cash, American Surety Company, New York, premium on bond	6.25
150.	Mar. 15, by cash, John L. Pomering, printing for Com. on Cancer, and for Com. on Public Relations	30.00
151.	Mar. 20, by cash, Standard Electrotype Co., electros from halftones—Pgh. views for annual session	10.05
152.	Mar. 20, by cash, A. C. Penney, mimeographing letters, Com. on Public Health Legislation	10.00
153.	Mar. 20, by cash, Walter F. Donaldson, exp. account, meeting Com. on Public Health Legislation	36.00
154.	Mar. 21, by cash, Evangelical Press, March Journal,	1,348.19
155.	Apr. 5, by cash, E. C. Rauch, plumbing and repairs, 230 State St.	53.75
156.	Apr. 5, by cash, Leon F. Miller, reporting hearing on Senate Bill 423 for Com. on Public Health Legislation	31.25
157.	Apr. 5, by cash, American Surety Co., premium on bond	37.50
158.	Apr. 5, by cash, Jenkins Arcade Co., May rent	30.00
159.	Apr. 5, by cash, J. B. Lowman, B. & L. Endowment Fund	100.00
160.	Apr. 5, by cash, Mary S. Blair, April salary	208.33
161.	Apr. 5, by cash, Hyacinth Beard, April salary	133.33
162.	Apr. 5, by cash, Mae Andrews, April salary	108.33
163.	Apr. 5, by cash, Helen Adams, April salary	85.00
164.	April 5, by cash, George A. Knowles, exp. account, Com. on Pub. Health Legislation	90.02
165.	Apr. 5, by cash, Walter F. Donaldson, exp. account, Com. Public Health Legislation	29.78
166.	Apr. 5, by cash, Evangelical Press, reprints, Com. Medical Benevolence	5.00
167.	Apr. 5, by cash, Evangelical Press, prospectus, etc.	67.55
168.	Apr. 5, by cash, Evangelical Press, reprints for Merck & Co.	$100.06
169.	May 2, by cash, John L. Pomering, folders for Com. on Cancer	64.00
170.	May 2, by cash, Evangelical Press, April Journal	1,507.06
171.	May 2, by cash, H. H. Turner, travel exp. Com. Pub. Health Legislation	20.66
172.	May 2, by cash, H. W. Mitchell, exp. account, special meeting B. of T.	27.34
173.	May 2, by cash, George A. Knowles, incidental exp., Com. Pub. Health Legislation	38.51
174.	May 2, by cash, Mumford & Mumford, legal services Defense Case No. 186	50.00
175.	May 2, by cash, Mary S. Blair, May salary	208.33
176.	May 2, by cash, Hyacinth Beard, May salary	133.33
177.	May 2, by cash, Mae Andrews, May salary	108.33
178.	May 2, by cash, Helen Adams, May salary	85.00
179.	May 2, by cash, J. B. Lowman, B. & L. investment, Endowment Fund	100.00
180.	May 2, by cash, Jenkins Arcade Co., June rent	30.00
181.	May 2, by cash, E. B. Heckel, treas., Benevolence Fund int. to date	453.69
182.	May 13, by cash, J. B. F. Wyant, travel exp., meetings B. of T.	75.96
183.	May 13, by cash, Fred E. Ross, exp. account, Com. on Sci. Work	38.64
184.	May 13, by cash, Harnies & Salsbury, Compensation Ins.	15.00
185.	May 13, by cash, Walter F. Donaldson, exp. account, meeting B. of T.	25.70
186.	May 13, by cash, John Ruth, reporting public hearing of House Bill No. 933	27.50
187.	May 13, by cash, Frank G. Hartman, exp. account, Com. Public Health Legislation	43.75
188.	May 24, by cash, Donald Guthrie, reimbursement for purchase of bonds through Hallgarten & Co., New York, as per action B. of T.	5,065.63
189.	May 24, by cash, B. J. Myers, for services in case of J. S. Gracey vs. Brann & Stewart, Workmen's Compensation Agreement Appeal No. 5251	200.00
190.	May 24, by cash, William T. Sharpless, exp. account, meeting B. of T.	10.29
191.	May 24, by cash, James C. Burt, exp. account, meeting Com. on Sci. Work	27.00
192.	May 24, by cash, Harry W. Mitchell, exp. account, meeting B. of T.	27.34
193.	May 24, by cash, Robert L. Anderson, travel exp., chr. Com. on Arrangements, two trips to Hbg.	54.00
194.	May 24, by cash, Walter S. Brenholtz, travel exp., Trustee & Councilor visits	67.97
195.	June 1, by cash, Walter F. Donaldson, quarterly salary	625.00
196.	June 1, by cash, J. B. Lowman, quarterly salary	62.50
197.	June 1, by cash, Frank C. Hammond, quarterly salary	625.00
198.	June 1, by cash, J. B. Lowman, B. & L. investment, Endowment Fund	100.00
199.	June 1, by cash, B. J. Myers, quarterly salary	75.00
200.	June 1, by cash, Jenkins Arcade Co., July rent	30.00
201.	June 1, by cash, B. A. Thomas, exp. account, meeting Com. on Sci. Work	14.45
202.	June 1, by cash, American Medical Association, A. M. A. Directory Sec'y.'s office.	12.00
203.	June 1, by cash, Evangelical Press May Journal	1,352.50
204.	June 1, by cash, Mary S. Blair, June salary	208.33
205.	June 1, by cash, Hyacinth Beard, June salary	133.33
206.	June 1, by cash, Mae Andrews, June salary	108.33
207.	June 1, by cash, Helen S. Adams, June salary	90.00
208.	June 1, by cash, Ida L. Little, quarterly salary	120.00
209.	June 1, by cash, John L. Pomering, letterheads, sec'y.'s office	9.00
210.	June 15, by cash, Mary S. Blair, reimbursement Petty Cash Fund	211.03
211.	June 15, by cash, Zaccheus R. Scott, exp. account meeting Com. on Sci. Work	28.50
212.	June 15, by cash, Lawrence Litchfield, exp. account, Trustee and Councilor	30.94
213.	June 15, by cash, George W. Himes, roofing and spouting 230 State St.	179.53
214.	June 15, by cash, Harvey Smith, incidental exp., Chr. Surgical Section	15.00
215.	July 1, by cash, Evangelical Press, June Journal	1,356.09
216.	July 1, by cash, Walter F. Donaldson, exp. account, Tristate Conference	38.14
217.	July 1, by cash, Mary S. Blair, July salary	208.33
218.	July 1, by cash, Hyacinth Beard, July salary	133.33
219.	July 1, by cash, Mae Andrews, July salary	108.33
220.	July 1, by cash, Helen Adams, July salary	90.00
221.	July 1, by cash, Evangelical Press, clasp envelopes, Journal office	52.50
222.	July 1, by cash, J. B. Lowman, Treas., B. & L. investment, Endowment Fund	100.00
223.	July 1, by cash, Jenkins Arcade Co., August rent	30.00
224.	July 1, by cash, H. F. Oves, 1927 county taxes, 230 State St.	59.85
225.	July 2, by cash, J. T. Bretz, school tax, 230 State St.	192.31
226.	July 2, by cash, J. J. Maglauchlin, papering, 3d floor, 230 State St.	17.41
227.	Aug. 1, by cash, Mary E. Reik, exp. acct., reporting Tristate Conference	78.97

Order No.		
228.	Aug. 1, by cash, Thomas G. Simonton, exp. account, Com. on Sci. Work	$27.00
229.	Aug. 1, by cash, Evangelical Press, reprinting application blanks	15.15
230.	Aug. 1, by cash, Mary S. Blair, August salary	208.33
231.	Aug. 1, by cash, Hyacinth Beard, August salary	133.33
232.	Aug. 1, by cash, Mae Andrews, August salary	108.33
233.	Aug. 1, by cash, Mildred Millheiser, five weeks' salary, stenog., Sec'y.'s office	106.25
234.	Aug. 1, by cash, Jenkins Arcade Co., Sept. rent	30.00
235.	Aug. 1, by cash, J. B. Lowman, B. & L. investment, Endowment Fund	100.00
236.	Aug. 1, by cash, J. L. Pomering, letterheads	12.50
237.	Aug. 1, by cash, Evangelical Press, July Journal	1,342.05
238.	Aug. 1, by cash, Walter F. Donaldson, reimbursement Petty Cash Fund	192.50
239.	Aug. 1, by cash, Arthur C. Morgan, travel exp., President-Elect	346.13
240.	Aug. 1, by cash, Arthur C. Morgan, exp. account, Com. Pub. Health Legislation	40.55
241.	Aug. 15, by cash, Walter F. Donaldson, quarterly salary	625.00
242.	Aug. 15, by cash, J. B. Lowman, quarterly salary	62.50
243.	Aug. 15, by cash, Frank C. Hammond, quarterly salary, Editor	625.00
244.	Aug. 15, by cash, J. B. Lowman, B. & L. investment, Endowment Fund	100.00
245.	Aug. 15, by cash, Evangelical Press, August Journal	1,466.53
246.	Aug. 15, by cash, Evangelical Press, estimated cost Sept. Journal	2,000.00
247.	Aug. 15, by cash, Mildred Millheiser, Sept. salary	85.00
248.	Aug. 15, by casb, Ida Little, quarterly salary	120.00
249.	Aug. 15, by cash, Helen Adams, salary one week, Sec'y.'s office	22.25
250.	Aug. 15, by cash, Mary S. Blair, Sept. salary	208.33
251.	Aug. 15, by cash, Hyacinth Beard, Sept. salary	133.33
252.	Aug. 15, by cash, Mae Andrews, Sept. salary	108.33
253.	Aug. 15, by cash, B. J. Myers, quarterly salary	75.00
254.	Aug. 15, by cash, E. A. Shumway, treas., refund a/c Medical Defense 1926-27 members Phila. Co. Sec'y.,	520.62
255.	Aug. 15, by cash, Evangelical Press, printing Membersbip List	279.00
256.	Aug. 15, Endowment Fund, net income from real estate	212.26
257.	Aug. 15, by cash, Wm. T. Sbarpless, exp. account, B. of T.	49.25
258.	Aug. 15, by cash, Mary S. Blair, advance acct. 1927 session	75.00
259.	Aug. 15, by cash, E. B. Heckel, treas., int. Benevolence Fund to date	506.90
260.	Aug. 15, by cash, W. S. Brenholtz, Councilor, exp. acct.	15.50
261.	Aug. 15, by cash, H. C. Frontz, exp., Sixth Councilor District meeting	23.55
262.	Aug. 15, by cash, M. S. Blair, Bus. Mgr., reimbursement Petty Cash Fund	192.27

In closing we wish to express our appreciation of the coöperation received from the officers of this Society and its component societies.

WALTER F. DONALDSON, *Secretary.*

REPORT OF THE TREASURER

September 1, 1926, to September 1, 1927

GENERAL FUND

SPECIAL ACCOUNT (AT 4%)

RECEIPTS

To Cash—Balance on band at beginning of fiscal year	$10,612.08	
—Interest on deposit	428.72	
		$11,040.80
WITHDRAWALS		
BALANCE ON HAND, September 1, 1927		$11,040.80

CHECKING ACCOUNT

RECEIPTS

To Cash—Balance on hand at beginning of fiscal year	$7,460.34	
Receipts during year	61,500.04	
		$68,960.38

DISBURSEMENTS

By Cash—Paid vouchers Nos. 1 to 262 inclusive	$59,043.24
BALANCE ON HAND, September 1, 1927	$9,917.14

SPECIAL FUNDS

MEDICAL BENEVOLENCE FUND

RECEIPTS

To Cash—Balance on band at beginning of fiscal year	$4,111.64	
Receipts during year	8,340.89	
		$12,452.53

DISBURSEMENTS

By cash—Withdrawn for investment and benefits	$5,627.12
BALANCE ON HAND, September 1, 1927	$6,825.41

MEDICAL DEFENSE FUND

RECEIPTS

To Cash—Balance on hand at beginning of fiscal year	$2,544.46	
Receipts during year	2,585.26	
		$5,129.72

DISBURSEMENTS

By cash—Withdrawn for investment and defense	$3,491.89
	$1,637.83

ENDOWMENT FUND

RECEIPTS

To Cash—Balance on hand at beginning of fiscal year	$705.68	
Receipts during year	835.67	
		$1,541.35
Withdrawals		
BALANCE ON HAND, September 1, 1927		$1,541.35

RESUME

TOTAL CASH BALANCES ON HAND, SEPTEMBER 1, 1926	$25,434.20	
TOTAL RECEIPTS DURING YEAR	73,690.58	
		$99,124.78
TOTAL DISBURSEMENTS		68,162.25
TOTAL CASH BALANCES SEPTEMBER 1, 1927		$30,962.53

CASH BALANCES AND INVESTMENTS

September 1, 1927

CASH BALANCES

General Fund, Special Account	$11,040.80	
General Fund, Checking Account	9,917.14	
Medical Benevolence Fund	6,825.41	
Medical Defense Fund	1,637.83	
Endowment Fund	1,541.35	
Total		$30,962.53

INVESTMENTS

MEDICAL BENEVOLENCE FUND

Registered Liberty Bonds, Third Series, 4¼%, Serial Nos. 70486-7-8-9, Par $1,000	$4,000.00
Registered Liberty Bonds, Third Series, 4¼%, Nos. 115909-10, Par $100	200.00
Registered Liberty Bonds, Fourth Series, 4¼%, Nos. 198563-4-5-6-7, Par $1,000	$5,000.00
Coupon Liberty Bonds, 4¼%, No. 24777, Par $500, Nos. 444749-50-51, Par $1,000	3,500.00
American Telephone and Telegraph, 1943, 5½%, Nos. 81893, 59558, 28598-99-600, Par $1,000	5,000.00
Chicago, Milwaukee and St. Paul Railway Equipment, Nos. 6178-9-80, Par $1,000	3,000.00
Baltimore & Ohio Railroad, Nos. 27406-27407-8-9-10, Par $1,000	5,000.00
Illinois Central Railroad, 1966, 4¾%, Nos. 1592-3-4-5, Par $500, Nos. 28011-12, Par $1,000	4,000.00
Buffalo, Rochester & Pittsburgh, 1959, 4½%, Nos. 15588-26637, Par $1,000	2,000.00
Penna. Railroad Co., 1964, 5%, Par $1,000	1,000.00
Wabash Railway Co., 1976, 5%, Nos. 6852-3, Par $1,000	2,000.00
Total	$34,700.00

MEDICAL DEFENSE FUND

Registered Liberty Bonds, 4¼%, Nos. 324243-4-5, Par $1,000	$3,000.00
Coupon Liberty Bonds, 4¼%, Nos. 444727-8-9-30-31, Par $1,000	5,000.00
Coupon Liberty Bond, 4¼%, No. 238938, due 1942, Par $500	500.00
Coupon Liberty Bonds, 1938, 4¼%, Nos. 1382125-1385611-12-13-14, Par $1,000	5,000.00
American Telephone & Telegraph Bonds, 1946, 5%, Nos. 55087-8-9-90-1-2-3-4-56792-3, Par $1,000	10,000.00

Lehigh Valley Railroad, 2003, 5%, Nos. 84178-9-80-81, Par $1,000	$4,000.00	
Penna. Railroad Coupon Bond, 1964, 5%, No. 21649, Par $1,000 (one-half of value to this fund, one-half to Endowment Fund, $500) Nos. 21470-1-2-3, Par $1,000	4,500.00	
Penna. Railroad Coupon Bonds, Nos. 48549-50, Par $1,000	2,000.00	
New York Central Equipment Bonds, 1937, 4½%, No. M-12551, Par $1,000	1,000.00	
New York Central Equipment Bonds, 1935, No. M-15351, 4½%, Par $1,000	1,000.00	
Total		$36,000.00
ENDOWMENT FUND		
Registered Liberty Bond, 4¼%, No. 1653, Par $5,000	$5,000.00	
Coupon Liberty Bond, 4¼%, No. 444726, Par $1,000	1,000.00	
Peoples' Building & Loan Association Stock, Certificate No. 2478, 100 shares, matures with 133d payment, Feb. 19, 1928, value at maturity	20,000.00	
Penna. Railroad Coupon Bond, 1964, 5% No. 21649, Par $1,000 (one-half of value to this fund, one-half to Defense Fund)	500.00	
American Telephone & Telegraph, 1957, No. M-24901, Par $1,000	1,000.00	
Chicago & Northwestern Railroad, 1987, 4¼%, Nos. 32938-34029-37409, Par $1,000	3,000.00	
Great Northern Railway, 1976, 4½%, Nos. 3894-5, Par $1,000	2,000.00	
Total		$32,500.00
TOTAL INVESTMENTS IN SECURITIES HELD BY THE TREASURER		103,200.00
TOTAL CASH BALANCES AND INVESTMENTS		$134,162.53

(In addition to the above the Society holds title to the property at 230 State Street, Harrisburg, occupied by the office of the ATLANTIC MEDICAL JOURNAL.)

J. B. LOWMAN, *Treasurer.*

REPORT OF THE CHAIRMAN OF THE BOARD OF TRUSTEES

To the President and House of Delegates:

Your Board reorganized October 14, 1926, and elected the undersigned as chairman and Dr. Walter S. Brenholtz as clerk. Dr. Arthur E. Crow of Uniontown, newly elected councilor from the newly created Eleventh Councilor District, and Dr. Harry W. Mitchell of Warren, reëlected councilor from the Seventh Councilor District, were presented to the Board.

At the regular meeting of the Board, February 1st, the resignation of the councilor and trustee from the Fifth Councilor District, Theodore B. Appel, newly appointed Secretary of the Pennsylvania Department of Health, was accepted, and Dr. Frank G. Hartman of Lancaster was elected to succeed Dr. Appel until October 5, 1927.

The Board of Trustees unanimously endorsed the plan proposed by the Committee on Medical Benevolence for increasing the Benevolence Fund, hoping thereby to enable our Society to give more assistance to indigent members or their dependents.

Our Board took action recommending to the Attorney-General of the State of Pennsylvania delegation by him of a member of his legal staff to prepare and conduct all cases having to do with alleged infractions of the Medical Practice Act.

At this meeting resignations accepted and appointments made resulted in the following personnel for the Legislative Committee of the Board: Drs. Crow, Guthrie, and Hartman, the latter chairman.

A special meeting of the Board was held in the Society's building at Harrisburg, March 29, for the purpose of discussing and considering legislation pending before the Pennsylvania Legislature in session. At this meeting it was decided that House Bill No. 1492, known as the One Board Bill, should not be presented for consideration by the Senate. The Board unanimously approved the activities to date of the Commission to Study Compensation Laws, Lever F. Stewart, chairman.

Meetings of the 1927 Scientific Work Committee were held on the same day and in the same place as our regular February and May meetings, affording an opportunity for members of the Board to meet with this most important committee. At all regular meetings of the Board, reports were received and discussed from the secretary of the Society, the district councilors, the chairman of the Committee on Public Health Legislation, as well as from special committees and the following standing committees of the Board: Committee on Finance—Drs. Guthrie, Bishop, and Brenholtz; Publication Committee—Drs. Hammond, Litchfield, and Wyant; Executive Committee—Drs. Mitchell, Crow, and Frontz. WILLIAM T. SHARPLESS, *Chairman.*

REPORT OF THE EDITOR AND THE PUBLICATION COMMITTEE

To the Board of Trustees:

During the year 1926-27, 83 scientific articles were published in the Pennsylvania section of the ATLANTIC MEDICAL JOURNAL, 64 case and clinical reports, 109 editorials, and 89 county society reports, in addition to several illustrated articles on Pittsburgh, the scene of our 1927 meeting, discussions and reports by an increasing number of our officers and committees, extended reports of meetings of the Tri-state Medical Conference, American Medical Association, and other organizations in which our members are particularly interested, official transactions of our own Society, and many other features of value.

Great care is exercised in editing all material for the JOURNAL, and much of the manuscript submitted is rewritten in order to preserve essential features but eliminate redundancies, thus conserving space for other valuable matter and keeping the JOURNAL down to a size consistent with its function.

A popular feature has been the case and clinical reports, which this year were published in greater profusion than usual.

Only associate editors who contribute are retained on the active list, and those whose names appear regularly at the head of the editorial page merit particular recognition for the fine type of editorials produced during the year. In addition, special editorials on matters of peculiar interest to our readers have been solicited from those cognizant with the subjects treated.

The three departments inaugurated two years ago (Public Health, Industrial Medicine, and Hospital Activities) have been continued, and a fourth has been added to them—Medicolegal and Legislative Notes. This has proved a popular feature, and the assistance of our readers in gathering the information published in this department would be welcomed.

There has been splendid coöperation this year on the part of many county society reporters in supplying abstracts of papers read at their meetings. Out of our sixty-three county societies, however, only twenty-two have been represented in this department of the JOURNAL during the past year: Allegheny, Berks, Blair, Cambria, Elk, Erie, Franklin, Jefferson, Lebanon, Luzerne, Lycoming, Mercer, Montgomery, Philadelphia, Schuylkill, Somerset, Tioga, Union, Warren, Washington, Westmoreland, and York. In addition, reports have been published from the Fourth Councilor District, the

Sixth Censorial District, and Northwestern Pennsylvania.

The news columns have received careful attention during the year, and in addition to personals, all available news of interest to the profession of Pennsylvania has been published. It has been particularly difficult to secure information about happenings in the western part of the State, and the aid of our readers is requested to help us cover this section more completely.

The departments conducted by the Woman's Auxiliary and by the Medical Society of Delaware are to be commended for the excellence of their contributions. Both organizations have coöperated well, and we feel that their departments have been a valuable addition to the JOURNAL.

It is too early to assess the results from the new policy on book reviews announced in the April number. Very few comments have been received, and the only objections registered have come from book publishers. Whether or not this results in an addition to the volume of advertising, it at least means the saving of considerable space and therefore expense. The reviews of such books as are accepted are conducted as formerly. These volumes are sent to experts in the subjects under discussion, who handle their criticism without prejudice, commending the worthy publications, and censuring the unworthy. The adoption of a policy favoring those publishers who favor our Society should receive the undivided support of all our members.

The business manager submits the following report to the Committee on Publication:

"For the twelve months from October, 1926, to September, 1927, inclusive, there was a net gain of 253¼ pages of advertising. We are pleased to report that the September JOURNAL contains more advertising than any number we have ever issued. We are sending personal letters to a large number of advertising prospects, and hope to show better results than were evident from the form letters used during past months.

"Letters have been sent out to book publishers and an editorial has been published in regard to the new policy on book reviews. The only essentially unfavorable reaction has been from Lippincott.

"We desire to express our appreciation of the coöperation offered by Dr. Robert L. Anderson, of Pittsburgh, chairman of the Committee on Arrangements, and his coworkers in providing articles and illustrations for every issue of the JOURNAL up to the time of the 1927 session.

"We also desire to express our appreciation of a decrease in rates of $40 per month offered by the Evangelical Press on the cost of the JOURNAL.

"May we once again remind the Committee of the desirability of bringing to bear on members a constant gentle pressure in the interest of the JOURNAL. You will recall that the usual excuse of the nonadvertiser is that members do not read the JOURNAL."

It is pleasing to note by the report of the business manager published below that there has been a continuous increase in circulation as well as in advertising during the past several years. The growth of the JOURNAL has been slow, but there has been a steady development of a substantial type, and we look forward confidently to a continuation of this happy condition.

The Committee begs to extend its grateful appreciation to the personnel of the JOURNAL office for the splendid coöperation that continues to be manifested, and does so much to make possible the success of its publication.

The Committee is always eager to obtain suggestions from the membership. After all is said, and done, the best report of the Committee is offered by the JOURNAL itself.

FRANK C. HAMMOND, *Chairman*,
LAWRENCE LITCHFIELD,
JAY B. F. WYANT.

REPORT OF THE BUSINESS MANAGER

To the Board of Trustees:

The Society's building at Harrisburg has been maintained in good condition during the past year, and there have been no changes in tenants of the apartments.

Complete arrangements have been made for the Pittsburgh session. Seventy spaces have been plotted for the technical exhibits, at a total list price of $5,958. Exhibit spaces have sold better this year than ever before, and we anticipate a greater demand than supply. The cost of the meeting will be somewhat increased over last year owing to the addition of another section, higher rental for meeting halls, and additional price charged for certain service. Charges for 1926 exhibit space were collected one hundred per cent.

We are pleased to report the best year yet in JOURNAL advertising. The April, 1927, number contained the largest amount of advertising in the history of the JOURNAL, and the June number ran a close second, while the volume in September will excel both of these. We have maintained the gain of last year, and have added to it substantially. A continuation of the effort on the part of the trustees and officers to secure reader interest in the JOURNAL is urged as a means of increasing the value of the advertising to readers, advertisers, and the Society's treasury.

Only a very high type of advertising is accepted, and for this reason, we are able to collect nearly one hundred per cent of our accounts.

There are indications of a growing appreciation of the service rendered by the JOURNAL in its classified advertising department. The volume of this type of advertising is increasing, and a greater number of replies are passing through the JOURNAL office.

An analysis of circulation figures for the past six years shows a gain since 1921 of 524 paid subscribers. A large part of this gain is due to the gradual increase in membership of the Society, part of it is due to the coöperation with the Medical Society of Delaware, and part is due to an increase in subscriptions from nonmembers. The present paid circulation is 7,834 copies per month, and we may hope soon to reach 8,000. The only other state medical journal whose circulation exceeds that of the ATLANTIC MEDICAL JOURNAL is the *New York State Journal of Medicine*, with a circulation on January 1, 1926, of 11,316. The 1927 edition of the *American Medical Directory* gives the number of physicians in New York as 18,634, and the number of members of the State Society as 11,121—a percentage of approximately 60. The same authority gives the number of physicians in Pennsylvania as 11,405, and the members of the State Society as 7,634—a percentage of approximately 67. The number of physicians in Delaware is quoted as 251, with 156 members of the State Society—a percentage of approximately 62. The Medical Society of the State of Pennsylvania can, therefore, congratulate itself that it is doing better than either of its neighbors in the matter of membership, but a percentage of 67 could still be bettered, and it is the hope of the business manager that the JOURNAL circulation may continue to increase through the coöperation of the county and State Society officers in adding to the membership. The subscriptions obtain-

able from nonmembers are limited by the nature of the publication.

Physicians are thought of as among the most stable elements of the population; yet careful records kept by the mailing department of the JOURNAL from May, 1926, to April, 1927, show that 531 of our readers moved during this period. This does not include temporary changes of address during vacations, etc. Constant care is required to keep the mailing list up to date.

The cost of printing the JOURNAL per page remains approximately the same as formerly, though the number of pages is slightly less this year than last, so that the total cost of printing has been somewhat reduced.

The sale of blanks for conduct of periodic health examinations has fallen off during 1926-27 in spite of constant advertising. During the year from October, 1925, to September, 1926, 38,200 blanks were sold. From October, 1926, to September, 1927, orders were received for only 8,500 blanks. This may be due to temporary saturation of the market. We should be sorry to attribute it to waning interest in health examinations. These blanks are sold at cost, so that decrease in sales does not represent any loss to the Society as a corporation; but it does indicate a loss of income to the members as individuals if it means that fewer health examinations are being performed.

M. S. BLAIR, *Business Manager.*

REPORTS OF INDIVIDUAL COUNCILORS

DR. FRANK C. HAMMOND, PHILADELPHIA, COUNCILOR FOR THE FIRST DISTRICT

To the President and House of Delegates:

The activities of the First Councilor District have been most satisfactory during the year.

The Philadelphia County Medical Society in January adopted a resolution looking forward to securing legislation in Pennsylvania against the sale of barbital, barbituric acid, its derivatives, preparations, or compounds, except by a prescription from a duly licensed physician, dentist, or veterinary. A resolution also was adopted looking forward to the prohibition of the sale of hypodermic syringes excepting to specified individuals and institutions entitled to the use of the same. Probably seventy-five per cent of the drug addicts administer drugs in this manner. The ease with which hypnotics can be secured is such that the physicians, druggists, dentists, and veterinarians must consider a joint plan of properly placing such legislation before Congress.

A series of public-health lectures was conducted for the laity. These lectures were given in the auditorium of the Home of the County Society.

Arrangements were made with the Bell Telephone Company of Pennsylvania whereby all names classified under "physicians" not M.D.'s would be deleted from the classified business telephone directory for Philadelphia.

The scientific programs have been of the usual grade of excellence, and a due number of out-of-town guests have appeared before the society. The society took a very active interest in legislative matters. Every attempt is being made to give due publicity in the newspapers of the activities of the society for its general effect on the public.

The building of the County Medical Society is being used more and more for purposes that formerly were beyond the scope of the society. Especially does this apply to the public health lectures conducted in its auditorium one night a week, with an average attendance of over two hundred, and the postgraduate seminars which are being conducted one afternoon a week for over one hundred physicians. The library of the society in charge of a librarian is being more extensively used. An honor room is to be constructed in the county society building. The first tablet to be erected therein will be a memorial tablet to the World War dead, which will be a fitting tribute to those physicians of Philadelphia who died in the service of their country during the World War. This tablet will be unveiled on November 9, 1927.

The dues of the county society were raised from $10 to $15. It is of interest to note that there are more paid-up members with the increase than for the corresponding period of last year with the former rate. So far as can be ascertained, not more than two, or possibly three, members resigned on account of the increase in dues. This is a worthy tribute that the membership is cognizant of the necessary present-day activities of a county society and the need of financial support.

DR. WILLIAM T. SHARPLESS, WEST CHESTER, COUNCILOR FOR THE SECOND DISTRICT

To the President and House of Delegates:

The councilor for the Second District has visited all the county societies in his district with one exception, and he finds in varying degrees in the county societies a great deal of interest in the meetings. The Schuylkill County Society still remains apparently the most active in the district.

The services of the councilor have been asked for only by a member of the Bucks County Society, against whom there is a suit for alleged malpractice. This suit has been pending for a long while, and when called for trial in June was dismissed as a mistrial on account of a discrepancy between the statement of claim made by the plaintiff and the statement of the plaintiff made on the witness stand. It has been postponed until the October term of court. The evidence in this case is well in hand. Experts have been very willing to give their time and testimony for the defense, and the member will be defended very vigorously.

It is well to call the attention of the members of a county society to the fact that they have a duty to perform when one of their members is accused of malpractice and his application for defense is approved, in giving him their moral support. If they are present at the court trial it will give confidence to the defendant and cannot fail to have a favorable effect upon the proceedings.

We propose on September 15th to hold the annual Second District Meeting at Valley Forge. The arrangements are well in hand, prominent speakers have been secured, and the prospect is for a successful affair.

DR. FREDERICK J. BISHOP, SCRANTON, COUNCILOR FOR THE THIRD DISTRICT

To the President and House of Delegates:

The Third Councilor District, under the new arrangement, consists of Wayne, Pike, Monroe, Lackawanna, Luzerne, Carbon, Northampton, and Lehigh Counties. Since my last report, all county medical societies of this district have been visited.

In every instance I have received the same report regarding society activities—very good meetings, good

attendance, programs of very good character, and every evidence of good fellowship. The Monroe and Wayne County Societies are showing signs of considerable activity, are more interested in their meetings, with prospects of having, in the near future, more frequent meetings than heretofore.

President Albertson, Dr. Charles B. Noecker, and the writer visited the Monroe County Society, and furnished the program for a very well-attended meeting, and, as stated above, believe we aroused the interest of the members present.

On another occasion President Albertson and the writer visited the Wayne County Society. The weather being very bad, the meeting was not so well attended. We suggested more frequent meetings, which suggestion was well received by those present.

It is with considerable pleasure I am able to report that no new cases for malpractice have been instituted in this district. Of the suits previously instituted and reported, two have been settled by a verdict "for the defendant," and the others have been continued.

A Woman's Auxiliary has been organized in Lackawanna County with a goodly number of members, and is prepared to act as occasion may require or as request may be made.

The 1927 meeting of the Third Councilor District was held at Irem Temple Country Club on September 7.

DR. DONALD GUTHRIE, SAYRE, COUNCILOR FOR THE FOURTH DISTRICT

To the President and House of Delegates:

I wish to report that during the year I have visited all the societies in the district, with the exception of Columbia and Snyder. The secretaries of the latter county societies have been communicated with and a visit arranged for the next regular meeting.

There has been but one threatened suit for alleged malpractice, but nothing developed and I am assured by the officers of the society that the threat will not materialize.

DR. FRANK G. HARTMAN, LANCASTER, COUNCILOR FOR THE FIFTH DISTRICT

To the President and House of Delegates:

Since I was elected in February by the Board of Trustees to serve until October 4th, in the place of former Trustee and Councilor Theodore B. Appel, I have devoted considerable time to legislative consideration of proposed public-health measures, but have not made any councilor visits to the county societies in the district.

Since I assumed the office, there have been no applications for medical defense from the district, nor have I been consulted about any of the activities of the various societies. I am well aware, however, that all the societies in the Fifth District are in good condition and functioning properly.

DR. HOWARD C. FRONTZ, HUNTINGDON, COUNCILOR FOR THE SIXTH DISTRICT

To the President and House of Delegates:

In the rearrangement of the Councilor Districts at the 1926 session, we became the Sixth, Cambria County becoming a part of the new Eleventh District.

The county societies in the district continue to function about as usual. The interest in scientific medicine is increasing, as evidenced by more men from a distance being called to deliver scientific addresses and by the increased number of clinics conducted by the staff members of local hospitals for the benefit of physicians of the district. Among the hospitals holding such clinics this year may be mentioned Blair County Hospital for the Insane, Altoona Hospital, J. C. Blair Memorial Hospital, and Clearfield Hospital.

Our annual councilor-district meeting was held at Hotel Dimeling, Clearfield, August 11, 1927. The physicians of the counties bordering on the district were also invited. One hundred and three physicians were present, eighteen Pennsylvania counties being represented. Dr. Edward B. Heckel, Pittsburgh, Chairman of the Board of Trustees of the American Medical Association, spoke on the American Medical Association, showing lantern slides of the building, and describing the diversified work of the Association now being carried on in comparison with its beginnings. Dr. Theodore B. Appel, State Secretary of Health, spoke on "The Place of Organized Medicine in the Field of Public Health." Dr. Thomas M. T. McKennan, of Pittsburgh, addressed the meeting on "Encephalitis Lethargica." The discussion was opened by Dr. William H. Sears of Huntingdon, followed by others. Dinner was served, after which addresses were delivered by President-Elect Arthur C. Morgan, Secretary Walter F. Donaldson, and Trustees Jay B. F. Wyant and Arthur E. Crow.

These group meetings conducted by the State Society are believed to be helpful factors in the great work of organized medicine. With at least eleven such meetings each year, in addition to the number of fine scientific meetings of the component county societies and the annual meeting of the State Society, high standards of medicine should certainly be maintained in Pennsylvania.

There are no suits for alleged malpractice pending in this district at present.

DR. WALTER S. BRENHOLTZ, WILLIAMSPORT, COUNCILOR FOR THE SEVENTH DISTRICT

To the President and House of Delegates:

I herewith present my report as councilor for the Seventh Councilor District, which comprises the county societies of Lycoming, Union, Clinton, Tioga, Potter, Cameron, and Elk. The physicians of Cameron County are members of the Elk County Society. The component societies are all in good condition, and hold meetings regularly. All of these societies have been visited during the year by your councilor, and the members of the various societies were found to be very much interested in the work of their particular society and the problems confronting county, state, and national medical societies.

The Union County Society, which a year ago was almost in a state of collapse, has taken on new life, is holding regular quarterly meetings, and the members have accepted the idea that they can maintain an active county medical society. I attended the meeting of this society in April, at Lewisburg, and in July, at Mifflinburg, at which latter meeting all but two of the members were in attendance.

On January 13th, in company with the president-elect, Dr. A. C. Morgan, I attended the meeting of the Elk County Society at Ridgway, which meeting was very well attended. On February 25th, in company with a number of physicians from Williamsport, I attended a very enthusiastic meeting of the Clinton County So-

ciety at the home of Dr. David W. Thomas in Lock Haven. On July 12th, I attended the annual meeting and outing of the Potter County Society near Coudersport. On November 12, 1926, in company with twelve members of the Lycoming County Society, I visited the Tioga County Society at Wellsboro. This meeting was attended by a number of physicians from Potter and Bradford Counties. The physicians of Wellsboro were the hosts upon this occasion, and more than forty physicians were present.

On August 5th, twenty-one members of the Lycoming County Society went with me to Blossburg to attend the Tioga County Society's meeting, which was held in honor of President H. W. Albertson and President-Elect A. C. Morgan of our State Society. A number of members of the Potter and Bradford County Societies attended. Sixty-one physicians were present. Dr. Morgan delivered an address on "Acute Cardiac Tragedies," and Dr. Albertson talked on State Medical Society questions. This very successful meeting demonstrated just what a small county medical society can do if the members become enthused.

The Lycoming County Society held all-day clinic meetings in November and May, to which members of all surrounding county societies were invited. There was a goodly attendance at both meetings.

The annual meeting of the Seventh Councilor District will be held this year in conjunction with the West Branch Medical Association, at the Lock Haven Country Club, on Wednesday, August 24th. The programs will include a heart clinic conducted by Dr. A. C. Morgan at the Lock Haven Hospital, from 10 to 12 a. m. Following the dinner, which will be held at the Lock Haven Country Club, addresses will be delivered by President H. W. Albertson and President-Elect A. C. Morgan. An address will be delivered by Dr. George P. Muller, Clinical Professor of Surgery, University of Pennsylvania.

The attendance at the meetings of the societies of the Seventh Councilor District was a decided improvement over that of previous years, as was the interest and enthusiasm which was manifested at all the meetings I attended.

No suits for alleged malpractice have been instituted in this district. The professional relations among the members of the various societies are apparently very amicable, and the present officers of the societies of the Seventh Councilor District are to be congratulated upon their energy. To them I desire to express my thanks for support and hearty coöperation.

DR. HARRY W. MITCHELL, WARREN, COUNCILOR FOR THE EIGHTH DISTRICT

To the President and House of Delegates:

The councilor for the Eighth District is pleased to report active interest of members in the society affairs of all the counties comprising this district. New members are being admitted in a high percentage of eligible physicians. The societies are well organized and give prompt response to any call that may be made for their services. The annual meeting of the members of this district, with some counties of other districts, continues to be well attended and is much enjoyed by the participants.

The council has had no important suits for malpractice brought to its attention.

From the standpoint of organization and interest in society matters the district is in a flourishing condition.

DR. JAY B. F. WYANT, KITTANNING, COUNCILOR FOR THE NINTH DISTRICT

To the President and House of Delegates:

The County Medical Societies of Armstrong, Butler, Clarion, Indiana, Jefferson, and Venango make up the Ninth Councilor District. During the past year councilor visits were made to all these, except Clarion and Indiana, and many members of the latter societies were seen at our councilor meeting at the Jefferson County assembly in June.

President-Elect Arthur C. Morgan, of our State Society, attended the June meeting of the Armstrong, Butler, and Jefferson County Societies. Dr. Morgan has a great number of former students and friends in the Ninth Councilor District, and the members were out in goodly numbers to greet him. By his pleasing manner and his good counsel through his able address, Dr. Morgan proved to be the climax of these meetings, excelling in attractiveness the good chicken dinner served by each county society.

If the attendance and interest at the monthly meetings throughout the year approach that of the meetings attended, it may well be said that the counties of the Ninth Councilor District are good and faithful components. The officers of the various county societies have made every effort to secure for membership all the good and worthy physicians in their respective counties.

Butler County leads the district in weeding out the charlatans and unlicensed cultists, thus protecting the people of the county from untrained healers.

Indiana mourns the untimely and homicidal death of one of her faithful members, Dr. Frank F. Moore, who was shot down by a deluded patient whom he was transporting to a hospital in his automobile.

The Venango County Society was visited on July 16, 1927. They had a good program, presented by visitors and one of their own members.

One suit for alleged malpractice was called off before coming to trial. One other suit is threatened, but is believed to be waning.

Good will and fairly good ethical practice prevail among members throughout the district.

DR. LAWRENCE LITCHFIELD, PITTSBURGH, COUNCILOR FOR THE TENTH DISTRICT

To the President and House of Delegates:

Since the rearrangement of the councilor districts by the 1926 House of Delegates, there are but four societies in the Tenth Councilor District. I was, therefore, able to make two visits each to Beaver, Lawrence, and Westmoreland County Societies.

The Allegheny County Society shows consistent progress in the development of its postgraduate work for members, and many members from surrounding county societies have been noticed in attendance upon the various conferences conducted. In spite of the fact that hospital staff meetings and pathological conferences in the various hospitals in Allegheny County are constantly advertised in the *Pittsburgh Medical Bulletin*, the attendance upon the same is not so large as it might be.

The Westmoreland County Society continues its high-grade scientific programs, and in its 1927 annual clinic surpassed all its previous efforts.

Beaver County continues its monthly scientific meetings with programs composed very largely of home talent. At the time of the visit of President-Elect

Morgan to Beaver County, we all enjoyed a visit, under the guidance of Dr. Fred Wilson, to the Beaver County Tuberculosis Hospital.

At the June 10th meeting of the Lawrence County Medical Society, the program consisted of a very interesting and instructive clinic, conducted by Dr. John A. Lichty, of Clifton Springs, New York, in the New Castle Hospital.

Threatened malpractice suits were apparently few in number in the tenth district during the year.

It is a pleasure to be able to report that all the societies in the district are holding monthly scientific meetings, showing commendable interest in public-health questions, and at least a healthy increase in membership.

DR. ARTHUR E. CROW, UNIONTOWN, COUNCILOR FOR THE ELEVENTH DISTRICT

To the President and House of Delegates:

I hereby submit to you my report as councilor of the Eleventh Councilor District, to which office I was elected to serve at the last meeting of our State Medical Society in October, 1926.

The Eleventh Councilor District comprises the following counties: Bedford, Cambria, Fayette, Greene, Somerset, and Washington. With the idea or motto in view that "in union there is strength," I set out to cement the forces within the counties coming under my jurisdiction. To do this, I felt there must be a better understanding of the operations within our component societies, and to bring about that understanding, it seemed to me that the fellowship of association was the one way by which this could be accomplished. Hence, it has been my established custom to have accompany me on my regular visits to the various county medical societies within my district, a number of the members of my own county society.

My first visit was to the Greene County Society, meeting in Waynesburg. This meeting was fairly well attended, although the number accompanying me from my county outnumbered the ones present from Greene County. This meeting was quite interesting because of the fact that practically every man present played a part in the scientific program presented.

My next visit was to the Washington County Society, meeting in Washington early in May. To this meeting there accompanied me from Fayette County about fifteen other members. Our president-elect, Dr. Morgan, and our secretary, Dr. Donaldson of Pittsburgh, were both present and took part in the program, which was very well presented by members of the Washington County Medical Society. I feel that the outstanding feature in this meeting was the fact that, this being a college town, where a number of young men were taking a premedical course, these boys had been invited to be present at this meeting and to see for themselves the machinery in operation in our various county societies. I believe this is a precedent which should be carried out in each and every county where a college course in premedical work is given.

It was not possible for me to visit the Cambria County Medical Society at the time set by this society, but I sent our State Senator, Dr. Harry Bell of Dawson, who reports to me that it was one of the best meetings he has ever attended. The morning program consisted of cases presented and discussed by the members of the staff of the Cambria County General Hospital. The afternoon was taken up by representatives of the medical and surgical department of the Johns Hopkins Hospital, Baltimore, followed by a banquet in the evening.

About the middle of July, it was my pleasure to attend the Somerset County Society meeting and annual outing. I am glad to say that I found them to be a wide-awake group.

I have not found it possible to visit the Bedford County Society, but this will be done before next October.

I am glad to report that every society with which I have come in close contact, either directly or indirectly, has shown a wonderful spirit of progress, manifesting at all times the willingness of members to coöperate with their fellow societies.

In Fayette, at the Uniontown Hospital, the staff holds a seminar every Wednesday at noon, to which the members of the county society are invited, and I believe that the work presented by the various members of the staff of our hospital as postgraduate instruction will measure up favorably with that of any other Society.

On the first of September of this year we expect to hold in Uniontown in the Doctors' Hall of the Uniontown Hospital, at 1 o'clock, our regular councilor district meeting, and I hope to have many representatives from every component society within my district; also to have with us men who will add greatly to the program which we plan to present.

REPORTS OF STANDING COMMITTEES

COMMITTEE ON PUBLIC HEALTH LEGISLATION

To the President and House of Delegates:

The Committee on Public Health Legislation desires to present the following report:

The recent session of the Legislature was a very busy one for public-health legislation. Many bills were introduced which, if passed, would have had a deleterious effect upon the health of the citizens of this Commonwealth.

A One Board Bill sponsored by our Society was introduced in the House and was referred to the Committee on Health and Sanitation. This bill was not reported out of committee.

A number of proposed amendments to the Workmen's Compensation Law were introduced. Your committee supported an amendment sponsored by our Commission on Compensation. This commission will submit a separate report of its work.

A number of bills were introduced having for their object the creation of licensing boards to permit the cults and others legally to carry on work which should be done only by those specially trained for the purpose. These bills, if enacted, would, in our opinion, have been detrimental to the health and welfare of the people of the Commonwealth, and were strenuously opposed by your committee.

A Chiropractic Bill was introduced in the House, passed by that body, and then referred to the Committee on Health and Sanitation of the Senate. A public hearing on this bill was granted by the Senate Committee. A united medical profession vigorously opposed the bill, and it was not reported to the Senate.

At the public hearing on the Naturopathic Bill before the Senate Committee similar opposition was presented. This bill also remained in committee.

Senator Freeman sponsored a bill creating a commission of twelve members to study the medical-practice

acts and other professional licensing laws of the several states. An appropriation of $20,000 was provided by the Legislature for this purpose. This commission will present its report to the next session of the Legislature in 1929.

Your committee desires to express its appreciation of the splendid help accorded by the members of the Society and the Woman's Auxiliary when called upon to assist in its work.

GEORGE A. KNOWLES, *Chairman,*
FRANK G. HARTMAN,
IRA G. SHOEMAKER,
WALTER S. BRENHOLTZ,
WALTER F. DONALDSON,
HARRY W. ALBERTSON,
ARTHUR C. MORGAN.

COMMITTEE ON SOCIETY COMITY AND POLICY

To the President and House of Delegates:

Our committee has had no business referred to it since our last report, and therefore has held no meetings. Our report as a nominating committee of representatives from our Society to the House of Delegates of the American Medical Association will be presented in due time.

HENRY D. JUMP, *Chairman,*
EDGAR S. BUYERS,
WILLIAM L. ESTES,
SAMUEL P. MENGEL,
JOHN B. MCALISTER.

COMMITTEE ON MEDICAL BENEVOLENCE

To the President and House of Delegates:

The medical benevolence work has been rather active during the year. Five members and one member's widow received aid from the fund. All sent letters of sincere appreciation of this help, and these impressed us with the fact that this phase of our Society's work is well worth while and the method of administration proper. Two of our beneficiaries died, and one was discontinued owing to other satisfactory arrangements which have been made. Two informal applications for aid were received. Both were distressing cases, but help could not be given since the applicants never had county medical society affiliation.

During the year the committee sent out one hundred letters asking for voluntary contributions to the fund. Only a fair response was received. The fund should be much larger in order to give an amount that would bring more comfort to the beneficiaries, and also in anticipation of a larger number of applications for aid.

The report of the treasurer of the committee follows:

Receipts

Balance in bank June 30, 1926 ..	$431.35*	
Received from treasurer January 7, 1927	771.67	
Received from treasurer May 6, 1927	453.69	
		$1,656.71

Disbursements

October 15, 1926	$160.00	
January 8, 1927	250.00	
January 19, 1927	75.00	
April 23, 1927	225.00	
April 28, 1927	75.00	
		$785.00
June 30, 1927, balance in bank		$871.71
August 15, 1927, received from treasurer ...		506.90
September 1, 1927, balance in bank ..		$1,378.61

HOWARD C. FRONTZ, *Chairman,*
EDWARD B. HECKEL,
JAY B. F. WYANT,
WALTER F. DONALDSON.

*Difference of $20 between this amount and balance reported in 1926 due to a clerical error now corrected.

REPORTS OF SPECIAL COMMITTEES

COMMITTEE ON DEFENSE OF MEDICAL RESEARCH

To the President and House of Delegates:

As no business was referred to the Committee on Defense of Medical Research during the past year, no meeting of the committee was held.

JAMES D. HEARD, *Chairman,*
JOSHUA E. SWEET,
MERWYN M. WILLIAMS.

COMMITTEE ON PROMOTION OF EFFICIENT LAWS ON INSANITY

To the President and House of Delegates:

The Committee on Promotion of Efficient Laws on Insanity desires to report that during the legislative session of 1927 it has carefully followed all bills in any way affecting the interests of those suffering from mental illness, and has presented its views concerning such measures to the committees in charge of the several bills. The committee has refrained from the introduction of any bills, believing that to be the function of the Department of Welfare with which it was in close contact throughout the legislative session, while giving all aid possible to the passage of bills originating from that source. The committee opposed some bills, originating from other sources, that failed in passage, and secured amendments that seemed necessary for the welfare of hospitals in other cases.

The $50,000,000 bond issue originating with the Public Charities Association passed the Legislature for the second time, and now goes before the people in the election of 1928. Its acceptance assures an orderly and well-regulated development of the hospital service for the mental groups, that will give Pennsylvania equal rank with other states that now excel in their provisions for such patients. These bonds, if the people approve, will be used for a ten-year building program for State-owned institutions caring for the insane, feeble-minded, epileptic, and delinquent. The overcrowding in mental hospitals is acute; the feeble-minded requiring State care need more housing facilities; and there is at present no segregation possible of the epileptic from the feeble-minded.

The Committee on Efficient Laws on Insanity of the Medical Society of the State of Pennsylvania believes that the members of the medical profession should interest themselves in aiding the passage of this bond issue, inasmuch as they know how much needed is this contemplated building program; further, our State Medical Society should, through its House of Delegates, express its approval of this measure. This Committee submits, therefore, to the House of Delegates the following resolution:

Be it resolved, That the House of Delegates of the Medical Society of the State of Pennsylvania approves the proposed

bond issue for $50,000,000 for a ten-year building program for State-owned institutions caring for the insane, feeble-minded, and epileptic; and be it further

Resolved, That each component county medical society, through its proper officers or committees, be asked to acquaint the citizens of the county of the need for the passage of this bond issue, and also to request their legislative representatives to continue to favor and support the proposed $50,000,000 bond issue.

The question of full state care of all mental cases, which has been under discussion for many years, was not presented to the Legislature at this session. A few measures of medicolegal character were presented, but no important legislation resulted from their consideration.

The long period of inadequate appropriations for any enlargement of existing accommodation for mental cases was happily ended. The present administration saw the need and supported requests for necessary funds in a manner not customary in the last fifteen years. It is hoped that this is but a beginning by the State of an effort to grapple with the problem of providing for the care of all cases needing either medical treatment or custodial care. Until this is done, the most important step in prevention has not been taken.

Our committee is of the opinion that its present title is not in accordance with its actual function, since its scope is believed by the present members to be broader than the name implies. It, therefore, recommends a change in name from the "Committee on Promotion of Efficient Laws on Insanity" to the "Committee on Mental Hygiene."

The committee is also of the opinion that the House of Delegates should take up for consideration the feasibility of defining more clearly the committee's scope and aims. In this day, with many welfare and educational organizations vitally interested in mental hygiene, some of them employing social workers and psychologists who, without medical supervision, are likely to assume prerogatives belonging to the medical profession, we believe that serious discussion ought to be given to this subject. There remains to be determined, it seems to us, an understanding of the function of this committee in connection with this problem. Largely through the efforts of President Albertson in two of our county societies, attempts have been made to define and establish some rules and procedures in connection with the association of county society members and all welfare organizations requiring the coöperation of members of the medical profession.

Since this committee ought to function in the State at large as your representatives in mental-hygiene propaganda, it is also recommended that it more properly should be a subcommittee of the Committee on Public Relations, rather than being subordinate to the Committee on Public Health Legislation.

HARRY W. MITCHELL, *Chairman*,
OWEN COPP,
J. ALLEN JACKSON,
EDWARD E. MAYER.

COMMITTEE ON ARCHIVES

To the President and House of Delegates:

No business or publications have been referred to our committee since our last report.

WALTER F. DONALDSON, *Chairman*,
JACOB S. HACKNEY,
JEFFERSON H. WILSON.

COMMISSION ON CONSERVATION OF VISION

To the President and House of Delegates:

Your commission has suffered a great loss the past year in the death of the chairman, Dr. William M. Sweet. He had been for many years one of the outstanding ophthalmologists of the country, was a lifelong apostle of visual conservation, and his death is a real loss in this work.

Most of the large industrial concerns and public utilities have learned that prevention of injury to employees is *good business*. They pride themselves, in many instances, upon the small number of casualties occurring, which they constantly strive to reduce still further. They have well-organized medical departments, and no effort is spared to limit the degree and period of disability, once injury has occurred. However, many eyes are still lost industrially through the blind optimism of the employee himself, who will temporize with what he considers a trifling injury, not realizing the seriousness, until, in many cases, the vision is hopelessly lost before the patient comes under observation. Your commission would therefore suggest that each member of the Medical Society of the State of Pennsylvania interest himself especially in this phase of conservation, and advocate to his constituency, whenever possible, the importance of early care and proper follow-up treatment in all cases of eye injury. We are of the opinion that the conservation of vision can be made fully effective only through the education and intelligent coöperation of the employee.

During the past year the optometrists of this State attempted to have legislation enacted authorizing them to "issue certificates of ocular and visual efficiency" and making the acceptance of such a certificate compulsory under any and all circumstances. The public hearing on this bill (No. 1078) was held on March 29, 1927, before the Senate Committee on Public Health and Sanitation. Your commission wishes to make acknowledgment of the efficient services rendered at this time by officers of our State Medical Society, and Dr. I. D. Metzgar, president of the State Board of Medical Education and Licensure. Largely through their valuable advocacy the bill was defeated. Your commission feels that this attempt at legislation is only another indication of the aggressive commercial spirit which seems to actuate the optometrists of this State. We feel quite sure that, in due time, the attempt will be repeated, and shall do all in our power to combat such pernicious legislation, which could work only harm to the people of this Commonwealth.

HUNTER H. TURNER, *Chairman*,
JOHN B. CORSER,
CHARLES E. G. SHANNON,
GEORGE CROSS,
CHARLES S. REBUCK,
HOWARD M. RITTER.

COMMISSION ON CANCER

To the President and House of Delegates:

During the year the activities of the Commission on Cancer as a whole have been devoted to two purposes:

First, the extension of cancer clinics in the larger cities throughout the State. The commission met once with State Secretary of Health Appel. Dr. Appel cordially received the views of the commission, and is now planning to establish cancer divisions in the State Clinics in the following cities: Allentown, Harrisburg,

Reading, Johnstown, Altoona, and York. Clinics are already in operation in Scranton, Bethlehem, and Williamsport, so the commission feels that this matter is now well covered in Pennsylvania.

Second, the commission has undertaken a large statistical study which promises to be of value, but as the collection of data will have to continue for several years, a report of progress only can be made at this time.

The above-mentioned statistical study is based on a very important study recently published by Lane-Claypon, England, under the auspices of the British Ministry of Health. It is considered important to put this study on along the same line in this country, and the cost of this would be about $500 for the coming year. We recommend that this sum be appropriated.

JONATHAN M. WAINWRIGHT, *Chairman,*
GEORGE W. GRIER,
JOSEPH D. FINDLEY,
ALBERT F. HARDT,
EDWARD B. HODGE,
GEORGE B. KUNKEL,
WILLIAM P. WALKER.

COMMISSION ON COMPENSATION LAWS

To the President and House of Delegates:

Following the last annual session of the Society, the commission immediately requested each county society to appoint a small committee with instructions to prepare their senators and legislators for the changes in Pennsylvania's compensation laws contemplated by the commission through instructions from the Society. Later, the commission met with the special legislative committee of the Board of Trustees, and arranged coöperation in the presentation of amendments. After the campaign designed to secure the State Society's aims as to compensation-law changes had failed in the last session of our Legislature, the commission succeeded in having a bill embodying minimum demands (Senate Bill 945) pass three readings in the Senate and two readings in the House. The bill was never brought out in the House for third reading.

This briefly represents the commission's efforts to secure legislation. All of this has been covered more fully in recent numbers of the ATLANTIC MEDICAL JOURNAL, under the column assigned to the Commission on Compensation Laws.

The commission recommends that the House of Delegates sanction the formation of a liaison between the Medical Society of the State of Pennsylvania and the authorities administering our compensation law, with the idea of clarifying and standardizing the relation of various medical conditions to injury. Such a liaison could be formed through a committee specially appointed for the purpose, a scientific committee, or through the Compensation Commission.

The commission recommends that action now be started looking toward a legislative campaign for 1929, and makes the following suggestions: (1) that the House of Delegates this year confirm emphatically and without reservation as many of the commission's recommendations as possible; (2) that each county society pledge one-hundred-per-cent support of the recommendations confirmed; (3) that those who will be charged with the task of steering such legislation in Harrisburg visit every component society, and through either the officers or the compensation committee of each society, make personal contacts with senators and assemblymen prior to the next session of the Pennsylvania Legislature; (4) that a compensation commission be continued as a part of the machinery of the State Society; and (5) that an entirely new commission be appointed with the thought of bringing new blood and new ideas into this very important work, which should not cease until the medical profession of the State of Pennsylvania succeeds in providing reconstruction surgery for every maimed man and reëducation for every maimed man whom reconstruction surgery has not made fit to return to his former occupation.

LEVER F. STEWART, *Chairman,*
MOSES BEHREND,
HERBERT D. GIBBY,
JOHN T. MACDONALD,
MORRIS A. SLOCUM.

COMMITTEE ON LABORATORIES

To the President and House of Delegates:

Your Committee has endeavored to increase the number of laboratories in the state meeting with the approval of the American Medical Association Council on Medical Education and Hospitals. To date but three laboratories in Pennsylvania have been approved. Several laboratories throughout the State, which we know are fully qualified, have for some reason not sought the approval of the Council. Whether this be due to indifference on the part of the directors of certain laboratories or to ignorance of this function of the Council, or to lack of sympathy with same, we are unable to determine.

We believe the objects of this Committee cannot be accomplished by mere letter writing, and would recommend an appropriation in order that a representative of the Committee might visit certain laboratories throughout the State. If this be not approved, we suggest that a representative of the Council of the American Medical Association be invited to visit laboratories deemed worthy of approval. In any event, we hope that within a year the plans of the Council on Medical Education and Hospitals may be more thoroughly understood and sympathetically received by the directors of qualified laboratories throughout Pennsylvania. Our review of the requirements for an approved laboratory, as set forth in the "Essentials" prepared by the Council, finds us in sympathy with the plan and its requirements, and against duplication by our Society of any effort or expense already assumed by the American Medical Association. RANDLE C. ROSENBERGER, *Chairman.*

COMMISSION TO CONFER WITH SECRETARIES OF HEALTH AND WELFARE

To the President and House of Delegates:

This commission has been in existence for three years. Each year it has offered to the Secretaries of Health and of Welfare the support and help of the State Society. Nothing of any importance during this period of time has come up requiring a specific conference with these State officers. As the Board of Trustees is in session four times each year, three of the meetings being held in Harrisburg, we believe that any conferences necessary could be held with the Trustees as a whole, or with a special committee appointed for that conference. We therefore recommend that this commission be discontinued.

HOWARD C. FRONTZ, *Chairman,*
WILLIAM T. SHARPLESS,
HARRY W. ALBERTSON,
WALTER F. DONALDSON.

COMMITTEE ON NECROLOGY

To the President and House of Delegates:

Your Committee on Necrology recommends as follows:

That the secretary of the State Society supply all secretaries of component county medical societies with uniform blanks, printed for permanent filing in loose-leaf volumes, on which to record deaths of members. The blanks shall be filled out in duplicate, the secretary of the component society filing one in the archives of the county society for a permanent record, and promptly forwarding the other to the State Society secretary for permanent filing in a loose-leaf volume, the same to become a part of the archives of the Medical Society of the State of Pennsylvania.

At the annual session of the Medical Society of the State of Pennsylvania, the secretary shall present a report of the Society's membership losses by death during the fiscal year, and shall arrange for publication in the annual membership list of the Society for permanent filing in the bound volumes of the Official Transactions said report, including data recorded on the necrology blanks on file.

We further recommend that the program for the opening general session shall include an item immediately following the invocation, headed "In Memoriam," same to be observed by the President's requesting all present to remain standing while the necrology report is presented, the report as presented verbally only to summarize in numbers the total deaths during the year, but to be followed by the adoption of a motion that the list as prepared be published in the minutes of the meeting. This would result in appropriate recognition of our deceased members, and a grouping in the minutes under one heading of their names, which had been published previously during the year.

We recommend that all component county societies adopt the use of the necrology blanks and the appropriate reception at the opening of each county society meeting of the report of the component society's necrology committee.

PROPOSED NECROLOGY BLANK

Full name .....
Address at time of death .....
Year of admission to county medical society .....
Positions held .....
Contributions to medical literature ... .
Research in medical science .....
Membership in societies, clubs, fraternities, religion, politics ..
Degrees received .....
Cause of death .....
Date of death .....
Children, if any, in medical school or practice .....

GEORGE E. HOLTZAPPLE, *Chairman*,
JAMES A. C. CLARKSON,
WM. DUFFIELD ROBINSON,
J. NORMAN WHITE,
J. FRED WAGNER,
WALTER F. DONALDSON.

REPORT OF THE COMMITTEE ON LAY EDUCATION

To the President and House of Delegates:

President Albertson, keenly alert to the necessity of the education of the public on medical matters, appointed a Committee on Lay Education to make a study of the subject and submit a report, with recommendations.

Without doubt one of the most important endeavors of a state medical society is the education of the lay public on medical matters. Probably the greatest feature we have to deal with is the education of our profession, before they engage in the activities of this field. Public education, therefore, has two branches: first, the education of the medical profession; and second, the elementary education of the lay public. To the medical profession, assisted by the educated lay public, there should be intrusted the duty of instructing the mass of the people. "Under adequate medical statesmanship the rank and file of private practitioners of medicine must excel industries, insurance companies, and governments in their zeal for the promotion of preventive medicine. That is to say, under adequate statesmanship, men in the private practice of medicine will deliberately set out to educate their clientele to look to physicians primarily for the care of health rather than for the cure of disease."

In the judgment of some observers "this education can best be accomplished by whole-time medical officers of health or commissioners of health, inasmuch as the public clearly understands that they have no ulterior motive; that they are interested only in safeguarding the public against unnecessary disease and death." On the other hand, undoubtedly more can be accomplished by a thoroughly organized plan under the auspices of the State Medical Society. This matter of lay education is not so simple as it might seem. It is an art to be able to repeat over and over again the same thing to the public in just a little different language.

If the public is to be educated, our ethics in regard to giving publicity must become more elastic. Have we the right, as individual physicians to attempt to educate the public through the medium of the newspapers? It would seem it is against our medical ethics to do so. It is a remarkable fact, and one not at all to the credit of the human intellect, that the medical profession have kept knowledge largely concealed which was essential to the life of their patients. As S. Hopkinson Adams said in 1912, the medical profession tried to educate the public secretly. Medical ethics, a strong weapon of conservatism, has been the greatest block to publicity.

The public consumes an enormous quantity of misinformation and near facts regarding health culture and popular hygiene. It is a general complaint among educated classes that sound information and advice are difficult to secure. Hence it is up to the State Medical Society in a thoroughly organized manner, clearly and scientifically to instruct the medical profession and the public, so that no such adverse comments can be made.

At the annual meeting of the health officers of the New York State Department of Health, held in June, 1927, they were addressed by a representative of the Associated Press, who challenged the medical profession in the interest of the public, for its reticence, and said that the medical profession would have to develop a new code of ethics which will permit of publicity.

So important is the matter of lay education that Dr. Wendell C. Phillips, president of the American Medical Association, at the annual session of the Association, May 16-20, 1927, urged continuous attention to the education of the public in matters of health. He suggested a proper system of censorship to safeguard medical publicity. (For Dr. Phillips' address, see *Journal A. M. A.*, May 21, 1927, p. 1644.)

On recommendation of the Judicial Council of the A. M. A., the opinion was adopted that all articles of an educational nature on medical or health subjects intended for the lay press or lay audiences should give expression to the consensus of opinion of the medical

profession rather than personal views, and that such articles should appear preferably under the auspices of the American Medical Association.

The president of the A. M. A. appointed a committee to act on public responsibility, having to do with the relationship of the medical profession to the public.

The House of Delegates of the A. M. A. also adopted a resolution whereby the Board of Trustees will prepare approved forms of letters or literature to be sent out by county medical societies to the public to promote the value of periodic health examinations, and information that the examinations can be made and records kept by qualified physicians who are members of the American Medical Association, in this manner hoping to circumvent the harmful advertising activities of commercial agencies dealing with periodic health examinations.

Illinois, Texas, and Wisconsin apparently are the leaders in lay education. The Illinois State Medical Society is the most enthusiastic, and undoubtedly has the best-organized system of lay education. In order to start the work, appeals were made to the members of their State Society for popular subscriptions, and the first year about 22 per cent of their membership contributed approximately $13,000. In order to finance this endeavor and other work, the pro rata from the county society to the state society was increased from $5 to $8 per member annually. In 1926, it cost $2.86 per member to conduct the propaganda on lay education. They have a woman who is a full time director in charge of the office of the Committee on Lay Education. The basic aim of their Lay Education Committee is: (1) To make clear the meaning and teach the necessity of the single standard of medicine. (2) To teach preventive medicine, toward which they believe the periodic health examination (medical and dental) is the single greatest step. (3) To achieve a high degree of efficient teamwork in health programs with all agencies that are interested in any phase of health work. (4) To establish in communities medical leadership of scientific activities in all lay movements for health. (5) To hold back in every possible way state medicine in every form, and prevent all legislation toward that end. This is being done through the component county societies assuming the responsibilities.

This about sums up the situation. Your committee has outlined a method of organization, and has considered the general plans for distribution of propaganda. We are bearing in mind, too, the consideration of mass education through paid spaces. It will mean a tremendous amount of work, and the raising of finances to see it through. The personnel of the offices of our State Society at Harrisburg has become very enthusiastic over the question of lay education, and forms a nucleus of intelligent coöperation to aid in this all-important endeavor.

The Medical Society of New Jersey last year spent about $3,000 in lay education. At their annual meeting in June, 1927, their House of Delegates generously gave permission for the appointment of an assistant to their full-time executive secretary, whose time shall be devoted exclusively to lay education, at a cost not to exceed $4,000 annually. Several other states are contributing annually to their program on lay education.

At the meeting of the Tristate Medical Conference held at Scranton, Pa., June 18th, the chairman of your committee read a paper on "Education of the Public in Medical Matters." It was the consensus of opinion of the Conference that this was the most important topic of the day, and that there is no subject before the public so far-reaching as that of public health education. It was at this Conference that we heard what was being done in New Jersey, and that the New York Society was formulating a plan of health education to be placed under its recently organized Committee on Public Relations.

In conclusion, it may be noted that some of the county medical societies in our State are attempting lay education in an unorganized manner, with indifferent results. But it shows a willingness, and when State-wide coöperation is requested as part of a thoroughly organized campaign, there should be no difficulty in securing it.

We desire to congratulate the Cambria County Medical Society, which to the best of our knowledge is the only one of our component county societies with an organized actively working program on lay education.

In order that the State Medical Society of Pennsylvania may assume her proper place among the leaders in this great altruistic endeavor, it is recommended:

That the Board of Trustees be requested to appropriate the sum of $1,000 for the continued work of this committee. The money to be expended principally in travel expense by a representative of our committee in a previously arranged visitation to the lay-education headquarters of the Illinois and Wisconsin State Medical Societies, and in visitation to certain of our representative component county medical societies. During these latter visits the committee's representative should lay before the selected county medical societies, the plans operating in Illinois and Wisconsin, with the results obtained to date. He should also seek an expression of opinion from said county medical societies regarding the plan to be adopted in Pennsylvania, and the methods of financing the same.

Respectfully submitted,

FRANK C. HAMMOND, *Chairman,*
WILLIAM H. MAYER,
J. WILLIAM SCHILLING,
ARTHUR B. FLEMING,
CHARLES H. MINER,
WALTER F. DONALDSON.

COMMITTEE TO REPORT ON OPEN-CLOSED HOSPITAL SITUATION

To the President and House of Delegates:

The committee, which was appointed in 1926 to study and report to the 1927 House of Delegates the extent to which publicly supported hospitals are open to the general profession in the State, and after such study to present a report as to the general advisability of such use of hospitals, has no report to make. The death of the chairman, Dr. Carey J. Vaux, who was most active in the work, served to stop the whole proceeding, and we regret the negative state of affairs now existing. Dr. Vaux had in his possession considerable data on the subject, but after his death we did not feel that we could with propriety ask that a search be made for it.

We would recommend that this committee be continued for another year under such leadership as the president may deem best, and with such changes in the personnel as will best serve the ends to be obtained.

WM. ROWLAND DAVIES,
HARVEY F. SMITH,
ORLANDO H. PETTY,
JOHN P. HARLEY.

REPORTS OF DELEGATES TO OTHER SOCIETIES

REPORT OF DELEGATES TO THE 1927 SESSION OF THE AMERICAN MEDICAL ASSOCIATION

To the President and House of Delegates:

Our Society was represented in the House of Delegates of the American Medical Association, which convened at Washington, D. C., on Monday, May 17th, by its complete group of duly elected delegates; namely, Charles C. Cracraft, J. Newton Hunsberger, William H. Mayer, John A. Campbell, Arthur E. Crow, John H. Murray, Orlando H. Petty, Walter F. Donaldson, J. Norman Henry, and Samuel P. Mengel. The members of our delegation served in the deliberations of the House and on its reference committees faithfully and in accordance with the best traditions of our Society. Dr. Mengel served on the Committee on Sections and Section Work; Dr. Henry, on the Committee on Reports of Officers; Dr. Hunsberger, on the Committee on Reports of the Board of Trustees; and Dr. Donaldson, on the Special Committee on Nurses' Training and Service.

A full report from our delegation was published on page 589 of the June, 1927, ATLANTIC MEDICAL JOURNAL, and copy of same is submitted to the proper reference committee of the House.

WALTER F. DONALDSON, *Secretary.*

OFFICERS' DEPARTMENT

WALTER F. DONALDSON, M.D.
Secretary
8062 Jenkins Arcade Building
Pittsburgh, Pa.

ANNUAL REPORTS

In this number of the JOURNAL appear the reports for the current year of the 1927 officers and standing and special committees. We sincerely hope that many of our members will carefully read these reports. It is the duty of the members of the 1927 House of Delegates to review studiously all published reports in advance of the first meeting of the House, which takes place Monday, October 3, 1927, at 3 p. m., in the French Room, second floor of the Hotel Schenley, Pittsburgh.

Several committee reports contain recommendations involving the expenditure of considerable sums of money (see reports of Committee on Lay Education, Commission on Compensation Laws, Commission on Cancer). Another report calls to the attention of the House of Delegates the advisability of the State Society including in its functions consideration for the approval of welfare organizations requiring the free services of physicians, before such services shall be given by members of this Society (see report of Committee on Promotion of Efficient Laws on Insanity). The financial report of any organization to which you may belong, with an annual expenditure of approximately $60,000, should interest you (see reports of the Secretary and the Treasurer). The reports of the Councilors, usually interesting, are particularly so this year. Note the reports of the circuit-riding councilors, who take with them on their visitations caravans containing, at times, a greater number of visitors than members present at the meeting of the county society visited. We are all indebted to these liaison officers, who, year after year, carry stimulation to the various component county societies in their councilor districts and who do so much to maintain the needed connection between county and State Societies.

Read the reports for the closing year and instruct the delegates from your county society in accordance with your personal reaction to the records and recommendations and suggestions contained, or be prepared to have your quiescence interpreted as an expression of your entire satisfaction.

LEONARD WOOD: PHYSICIAN, SOLDIER, AND STATESMAN

General Wood, "America's first proconsul," died in Boston on August 6th, following an operation. The medical profession is proud of his achievements, for his career has not been surpassed for sheer devotion and inspiring sacrifice of self to duty. He was graduated from Harvard Medical School in 1884. He was dismissed from the hospital where he was serving an internship for an infraction of the rule forbidding interns to operate, because he did a successful emergency operation on a child. Thus early in his medical career he showed he was a man of action. He was commissioned an assistant surgeon in the Army in 1886 and served as medical and line officer in the great campaign of 1886 against the Apache Indians. In recognition of that service he was awarded the Congressional Medal of Honor in 1898. To the old Indian fighters he was known as "Bull Bison." He was "a lean, clean-cut, yellow-white-headed contract doctor" who "won his commission as a fighting man in the sun-smitten halls of the canyons and deserts of the Southwest."

With Theodore Roosevelt, then a civilian, as lieutenant colonel, and Dr. Wood as colonel, he organized the "Rough Riders" for service in the Spanish-American War. He was chief of staff and father of the "Plattsburg Camps."

Dr. Wood's career, in many respects, is one of the most remarkable of our national history. The medical profession is proud of his accomplishment in cleaning up Santiago, which a sea

captain said "could be smelled ten miles out at sea." He developed yellow fever at this post, but most fortunately recovered. In 1899 he was made governor-general of Cuba. It was the commission appointed by him that solved the mystery of yellow-fever transmission. Lord Cromer, British maker of modern Egypt, described his government of Cuba as "the greatest piece of colonial administration in all history." The brilliancy of General Wood in the Philippines and in Cuba attracted the attention of the world.

As chief of staff of the Army, he left no stone unturned to place it on a modern basis. He was a foe of pacifism, and was the father of military preparedness, as expressed by training camps of the Plattsburg type, for the development of civilians for service in the reserve corps. In the early part of the World War he suffered many rebukes from the Wilson administration, and when the United States entered the war, he was "sidetracked" and sent to Camp Funston, where he trained the Eighty-ninth Division, only to be removed from command on the eve of its departure overseas. He was a candidate for the presidency, but the Republican convention at Chicago named Warren G. Harding. What a wonderful thing it would have been to have a physician as president of our country! A year later the press announced that he was about to become provost of the University of Pennsylvania, but he was "drafted" for the "Islands," where he was supposed to serve for a year, but remained for six years.

The General's physical misfortunes are familiar to most physicians, but his certification by a medical board, as "fit for active field service," in 1917, when he was the ranking officer of the regular army, has been vindicated by his activities in the last ten years. While in France observing warfare, prior to the entry of the United States into the war, he was wounded by a shell fragment.

Shortly before leaving the Philippine Islands this summer, where he was serving as Federal Administrator, he was operated upon for double hernia. He reported, despite his poor physical condition, to President Coolidge, at the Summer White House in North Dakota, and submitting again, on account of brain pressure, for the second time to the surgeon's scalpel, in a Boston hospital, thus suddenly ended his splendidly busy career.

Medical officers subordinate to him recently in the Philippine Islands have told us of his continued interest and sympathetic coöperation in their warfare against leprosy and other forms of sickness and disease.

Just previous to submitting to operation, he delivered an address in Manhattan in advocacy of a fund of $2,000,000 now being quietly collected in the United States to alleviate, study, and prevent leprosy. The experimental work will be conducted on the island of Culion, in the Philippines, where there are 5,200 lepers. Dr. Wood stated that "It has been proved that cures are possible at nearly any stage of the disease, and more likely if treatment is started quickly."

Interment took place in the Rough Rider's Section at Arlington Cemetery, Washington, D. C.

It is said that General Wood left a diary containing the story of each day, dictated before the night passed. May it soon be published, telling in his own words the story of his life.

Soldier, surgeon, administrator, statesman—his work is done, and long will be remembered, although he deserved greater recognition than his country gave him.

CHANGES IN MEMBERSHIP OF COUNTY SOCIETIES

The following changes have been reported to August 16th:

BLAIR: *Reinstated Member*—Daniel R. Mock, 616 Fourth St., Altoona.

CLEARFIELD: *Reinstated Member*—Jonathan A. Currier, Grampian.

CHESTER: *Removal*—Dominic J. Rosato from Berwyn to Devon.

FAYETTE: *New Member*—A. McG. Duff, Republic. *Reinstated Member*—Edward T. Gruetzner, Fairchance.

LAWRENCE: *Removal*—J. Walter Harshberger from Pitcairn to Mt. Pleasant Mills (Snyder Co.).

MONTOUR: *New Member*—Kenneth Fowler, Geisinger Hospital, Danville.

MCKEAN: *Death*—James Otto, Port Allegany (Univ. of Buffalo, '78), July 17th, aged 71.

PHILADELPHIA: *New Members*—Benjamin Haskell, 315 S. Fifteenth St.; Paul A. Loefflad, 4932 Walnut St.; Julius Segal, 2128 S. Fourth St., Philadelphia. *Reinstated Members*—William F. Horan, Central Medical Bldg.; John M. Cruice, 2021 Pine St., Philadelphia. *Deaths*—Charles F. Chandler (Medico-Chi. Coll., Phila., '91), July 12th, aged 57; Joseph M. Spellissy (Univ. of Penna., '90), July 27th; Francis M. Perkins (Univ. of Penna., '76), recently, aged 76. *Removal*—Ellen C. Potter from Harrisburg to 504 Riverside Drive, Trenton, N. J.

WESTMORELAND: *Death*—John S. Crawford, Greensburg (Hahnemann Med. Coll., '75), July 24th, aged 74.

YORK: *Death*—Austin M. Grove, York (Jeff. Med. Coll., '02), July 30th, aged 47.

PAYMENT OF PER-CAPITA ASSESSMENT

The following payment of per-capita assessment has been received since July 15th. Figures in first column indicate county society numbers; second column, State Society numbers:

July 23	Philadelphia	2036-2050	7583-7597	$72.50
25	Clearfield	64	7598	5.00
	Montour	28	7599	2.50
Aug. 5	Blair	103	7600	5.00

THE

MEDICAL SOCIETY OF DELAWARE

PROGRAM

ONE HUNDRED AND THIRTY-EIGHTH ANNUAL SESSION

October 11 and 12, 1927, Farnhurst, Delaware

Tuesday, October 11th, 10 A. M.

MEETING OF THE HOUSE OF DELEGATES

AUDITORIUM OF THE STATE HOSPITAL

Order of Business:

1. Call to order.
2. Roll call.
3. Reading of minutes of last session.
4. Appointment of Committee on Nominations.
5. Reports of officers.
   a. President.
   b. Secretary.
   c. Treasurer.
   d. Councilors.
   e. Editor.
6. Reports of committees:
   a. Scientific Work.
   b. Public Policy and Legislation.
   c. Medical Education.
   d. Necrology.
   e. Publication.
   f. Hospitals.
   g. Health Problems in Education.
   h. Auditing.
   i. Nominations.
7. Reports of delegates:
   a. American Medical Association.
   b. Federation of State Medical Boards.
   c. Other state societies.
8. Unfinished business.
9. New business:
   a. Resolutions.
   b. Communications.
   c. Appropriations.
   d. Approval of Scientific Program.
   e. Selection of Meeting Place.
   f. Miscellaneous.
10. Adjournment.

12:30 P. M.

Luncheon will be served by the State Hospital.

2 P. M.

MAIN BUILDING OF STATE HOSPITAL

Clinics by Members of Consulting, Visiting, and Hospital Staffs:

General Surgery—HAROLD L. SPRINGER, M.D.
Laryngology, Otology, and Rhinology—W. O. LAMOTTE, M.D.
Gynecology—WILLIAM WERTENBAKER, M.D.
Practice of Medicine—HENRY W. BRIGGS, M.D., and ALBERT ROBIN, M.D.
Ophthalmology—J. A. ELLEGOOD, M.D.
Roentgenology—GEORGE C. MCELFATRICK, M.D.
Neurology and Psychiatry—M. A. TARUMIANZ, M.D., with *Associates,* W. R. LIVINGSTON, M.D., and P. F. ELFELD, M.D.

6 P. M.

Dinner to the members and guests, given by the New Castle County Medical Society.

7:30 P. M.

President's Reception.

8 P. M.

Concert and vaudeville given by the Hospital.

9:30 P. M. to 1 A. M.

Dancing.
Refreshments.

Wednesday, October 11th, 9 A. M.

AUDITORIUM OF STATE HOSPITAL

Invocation.
Address of Welcome.
President's Address.
Report of House of Delegates.

Papers:

10:30 A. M.—By local men.

11:00 A. M.—The Treatment of Heart Disease.
JOSEPH SAILER, M.D., Philadelphia, Pa.

11:30 A. M.—Mental Disease and the Family Doctor.
CHARLES W. BURR, M.D., Philadelphia, Pa.

12:30 P. M.

Luncheon given by the State Society.

2 P. M.

Papers:

2:00 P. M.—Surgical Treatment of Cleft Palate.
G. M. DORRANCE, M.D., Philadelphia, Pa.

OUTLINE. Why most cleft-palate operations are partial failures. The methods of determining when and what operations shall be performed. A discussion of the methods to correct such failures.

2:30 P. M.—The Management of the Patient with Prostatic Obstruction (Lantern Demonstration).
B. A. THOMAS, M.D., Philadelphia, Pa.
3:10 P. M.—Obstetrics in the General Practice of Medicine.
JOSEPH S. MCDANIEL, M.D., Dover, Del.
3:40 P. M.—Gynecological Operative Technic (Moving Pictures).
WILLIAM WERTENBAKER, M.D., Wilmington, Del.
4:20 P. M.—General Survey of Gastro-intestinal X-Ray Study.
B. M. ALLEN, M.D., Wilmington, Del.
4:40 P. M.—Short Discussion of Different Obstetrical Forceps.
J. W. BASTIAN, M.D., Wilmington, Del.
5:00 P. M.—By local men.
5:20 P. M.—The Malaria Treatment of General Paresis.
W. R. LIVINGSTON, M.D., and P. F. ELFELD, M.D., Delaware State Hospital.

THE ANNUAL MEETING

The 138th Annual Session of the Medical Society of Delaware will be held at the State Hospital, at Farnhurst, on Tuesday and Wednesday, October 11th and 12th. Our meetings are gradually assuming more and more importance, and our papers more and more value. This year the Committee on Arrangements is making greater effort than ever before to prepare a program that will attract every physician in the State. Whether he is a member of the Society or not, every doctor will be made welcome; and after it is all over those who fail to attend, will, we believe, feel a tinge of regret.

Our State is so small and our Society membership so limited that in a short while every doctor knows, or knows about, every other doctor. This makes it difficult to secure papers from our own members, since every man approached immediately says, "Oh, the boys know all about what I'm doing; I have nothing new." But even so, it happens that for the past few years some of the best and snappiest papers read at our meetings have been the short ones presented by our own members. It will be the case again this year, though the names of two essayists and the titles of their papers are yet to be definitely determined.

The program is given above, practically in full. The usual order of events will prevail, with the added feature of clinics in the new operating suite at the hospital, by the staff. The out-of-state papers this year will be presented by men of exceptional standing, including Drs. Joseph Sailer, Charles W. Burr, J. M. Dorrance, and B. A. Thomas, all of Philadelphia. It is also hoped to have with us Dr. William S. Thayer, of Baltimore, president-elect of the American Medical Association. As the final attraction, Dr. Joseph C. Bloodgood, of Baltimore, who is now in Europe, is expected to return in time to attend and make an address.

NOW, DON'T BLUFF, DOCTOR! YOU ARE NOT TOO BUSY TO ATTEND THESE MEETINGS, AND YOU OWE IT TO YOUR PATIENTS TO BE THERE, BOTH DAYS,

TUESDAY, OCTOBER 11TH, AND
WEDNESDAY, OCTOBER 12TH

THE SANATORIUM TREATMENT OF PULMONARY TUBERCULOSIS*

SETH H. HURDLE, M.D.
WILMINGTON, DEL.

The sanatorium, in treating tuberculosis, tries to be of value to both the community and to the individual. Its treatment is aimed to solve a very complex problem, and it endeavors to achieve results in three important fields; namely, prevention, education, and cure.

In the line of prevention the sanatorium certainly does much to prevent the spread of tuberculosis by removing from the community life many patients who are daily developing millions of germs and expectorating them. The number of people liable to become infected from a single active case depends upon so many factors that it is impossible to estimate the good done by isolating the patient in a sanatorium.

It certainly takes away a constant supply of virulent tubercle bacilli from the members of the patient's family, and it has been noticed that after the opening of a large sanatorium by a city, the incidence of tuberculosis among its population immediately drops. Just what percentage of decrease is due to the removal of the source and what is due to other factors is impossible to say.

The educational work of the sanatorium is of benefit both to the individual and to the community at large, for here the patient is taught many things that will aid him to lead a regular life, become a useful citizen, and make him able intelligently to destroy the germs he produces so that he will no longer be a danger in the community. In the sanatorium he is taught by individual instruction how to care for his sputum and to lead a regular life. He is told about the disease he has and how dangerous it is if not taken in time and given the attention it deserves. Then comes a long period of sanatorium life during which he gradually learns by asking questions, by being corrected when he makes a mistake, by observation, reading, and by lectures. Among other things, he is taught to shun the

*Read before the Medical Society of Delaware, Dover, October 13, 1926.

quack remedies and the advice of friendly neighbors, and to tell his troubles only to his physician. This is very important to him when he goes home from the sanatorium, for no matter how careful he be, sooner or later he will get a cold, and then he knows better than to go to the drug store for a bottle of medicine, but goes to his physician who can treat him, knowing that every care must be taken to prevent a cold from reducing the patient's resistance and permitting a reactivation of his tuberculosis.

From the curative standpoint, the sanatorium appeals to that large class of people who, for one reason or another, cannot get satisfactory treatment at home, whether it be from lack of will power to give up the everyday amusements, from worry, lack of finances, lack of a suitable home, or for the sake of getting away so that there will not be danger of infecting the family. These classes include a large number of people, but there are some cases, where conditions suit, that can be treated just as well at home. Each case must be decided upon its merits, and general rules should not be made to apply to individual cases. In making a selection, the sanatorium should not be used as a dumping ground for advanced cases. If, after treatment at home for a short period of time, the patient does not improve, then something else should be tried. Here the patients themselves are frequently to blame, for they go from one physician to another and usually try patent-medicine cures at the same time without the knowledge of the attending physician.

Once it has been decided to send the patient to a sanatorium, there should be no delay. Giving a man time to straighten out his affairs usually means he will do three weeks' work in one week, and often turns a favorable case into a hopeless one. Tuberculosis is just as serious as pneumonia, and should be treated just as thoroughly.

Therapeutically we must admit that there is no single drug or biologic product which will kill the offending organism or neutralize its toxins. But we do know that the human body has a remarkable resistance to these organisms, and this resistance will, under ordinary conditions, give protection from them. Therefore, our only hope is the restoration of resistance to the point where the body will not only repel further invasion but repair the diseased portions by replacing the diseased lung tissue with heavy scar tissue strong enough to prevent the bacteria from making any more trouble.

In restoring bodily resistance. there are three very important factors that form the basis for the cure of tuberculosis. These are rest, good food, and fresh air. Of these, rest is by far the most important. By rest, we eliminate all waste of energy and use the energy saved to fight the bacteria. We begin treatment with rest in bed, and the sicker the patient the more complete the rest and the longer it is continued. Most patients require about six weeks in bed at the beginning of the treatment, gradually reducing the time in bed by letting them rest in a reclining chair, until finally all the symptoms have subsided and temperature and pulse are normal. Then graduated exercise may be begun.

Exercise is a very dangerous agent, and must be prescribed with care. The patient should not be allowed to take exercise until all symptoms such as cough, expectoration, temperature, rapid pulse, and shortness of breath have entirely disappeared or been greatly reduced, and then he should never have enough exercise to tire him. He should always stop before becoming weary, and it is better to divide the exercise between morning and afternoon than to take it all at one time.

The patient's food will depend upon the individual, but generally if there is no contraindication we give a very liberal diet consisting of practically everything good to eat. The kind of food must be changed often, and an ever-varying menu is one of the best of tonics. Patients usually eat better if they do not know what they are going to have until it is served than if they have the trouble of trying to think up something they like. Three regular meals a day should be provided, and these may be supplemented by milk between meals when the patient can stand it and needs it. There is no good accomplished by overloading a patient with more food than he can digest. The time-honored feeding by milk and eggs has lost its place, or rather found its proper place in the tuberculosis diet. Only a few years ago this idea was so prevalent that to tell a patient he had tuberculosis was synonymous with telling him to eat large quantities of raw eggs mixed with large quantities of milk. All this has changed, and the milk-and-egg diet is used in only a few cases over a short period of time, such as in cases following hemorrhage where the patient has lost weight due to a restricted diet. Then milk and egg will help him regain his weight, and if given for only a short time, do no harm. If they are continued long, they will upset the digestion—and a tuberculous patient with a bad stomach surely has an up-hill fight. I do not mean by this that eggs and milk should not be used, but that raw eggs and milk together are very hard to digest, and should not be given in this form over a very great period of time.

Air is, of course, necessary to life, and in

tuberculosis it is very important to have an abundance of pure air. It not only supplies the body with oxygen, but it also, by flowing over the body, stimulates the skin and takes away the poisons given off by the skin.

The matter of climate is much discussed, but the general opinion among workers in tuberculosis seems to be that an abundance of good clean air is all that is necessary, and if there is anything in various climates, their value is not over five per cent. There are many other factors that deserve far more consideration than climate. Foremost among these is financial worry. A patient should not be sent away from his home and friends unless there is a definite source that will supply him with cash, and this must be in sufficient amounts to assure him the care he would receive at home. Going away with the expectation of securing light work is also very foolish; for, as a rule, such work has been taken by other patients long ago. Tuberculosis can be cured in any climate if treatment is started early, but cures cannot be expected, even in the best of climates, when the disease has progressed to the point where there has been much actual destruction of lung tissue.

In addition to the routine rest, food, and air, there are certain symptoms that require special attention. Some of these are cough, expectoration, night sweats, and poor appetite. All of these are usually quickly remedied by rest in bed in fresh air. The cool air seems to help the cough more than warm air. Sometimes the cough has to be relieved by sedative cough mixtures. It is important to get it stopped or much abated, and the patient can do much to control it himself. Very little healing can go on in the lung if it is under the strain of frequent coughing. For loss of appetite, we use tonics; and for night sweats, a number of drugs have been used, but I find atropin gives the most satisfactory results.

Of all symptoms of tuberculosis, probably pulmonary hemorrhage is the most prominent. It certainly frightens the patient most. Hemorrhage may come from two causes: from a diapedesis through the walls of vessels in an intensely inflamed area, and in this case it is usually, but not always, small in amount and continues for several days as streaked sputum; or from the rupture of a blood vessel by gradual encroachment of the tuberculous process. In this case, the result will depend upon several factors, foremost of which is the size of the ruptured vessel, the contractility of its walls, and the coagulability of the blood.

In treating hemorrhage we try to lower the blood pressure, restrict the amount of blood flowing to the bleeding organ, and increase the coagulability of the blood. To accomplish this we first get the patient at rest in bed, with an ice cap over his chest, and give him cracked ice by mouth to allay the nervous tickling in his throat which provokes cough. We then give morphin, atropin, and nitroglycerin by hypodermic, together with a hemostatic or horse serum. Hemorrhage, as a rule, is not fatal even when there are several repetitions in a few hours, for the loss of blood is not so great that it cannot soon be replaced. Of course, if a large pulmonary artery is ruptured, death ensues in a few minutes, but this is rare except in far-advanced cases. The greatest damage done by hemorrhages is the extension of the lesion by carrying blood and infected material from the diseased part of the lung into healthy parts. It is important not to give too much morphin, as it will make the bronchial mucosa so insensitive that it will not expel the blood which collects in the bronchi. The patient must not cough hard for fear of breaking up the clot, yet he must cough up the blood or it will spread out through the lung and cause consolidation and increase the area to a great extent. If hemorrhage persists, pneumothorax may be employed.

Pleurisy frequently occurs and is a painful symptom. Counter-irritants or strapping with adhesive will usually relieve the dry type. The moist type usually is not painful after the fluid collects, and the fluid need not be removed unless it accumulates in such large quantities as to embarrass the respirations. Then the chest can be tapped and the fluid drained off.

Besides the foregoing symptoms, there are several complications that deserve mention here. Foremost among these is intestinal tuberculosis. It occurs as a complication in pulmonary tuberculosis, and is a very grave condition. It usually does not occur unless there is a pulmonary cavity. Heliotherapy is especially beneficial if begun early, but if the symptoms have become marked and the condition well developed before treatment is begun, it is practically hopeless.

Laryngeal tuberculosis is practically always a complication of pulmonary tuberculosis, and it most often occurs when the case is far advanced. This is very difficult to treat, as the patient usually has little resistance. Cauterization of the tubercles, heliotherapy, and injection of the nerve to relieve pain are among the possibilities, but usually are a hopeless fighting against heavy odds. However, there are some cases of throat tuberculosis that occur either primarily or secondary to small pulmonary lesions, and these usually clear up on topical applications and general treatment.

In addition to the above, there are a few other modes of treatment that have been widely accepted in their day. These are pneumothorax, heliotherapy, and tuberculin.

Pneumothorax is a very valuable treatment in certain selected cases, but unfortunately there are only a comparatively few suitable. It, too, has many drawbacks. First, there are many cases that would be suitable, only that we cannot find any pleural cavity not obliterated by adhesions. In others, the lung may be held up by a rigid, walled cavity, and in most cases the first or immediate relief is more pronounced than the ultimate relief. It is a fairly easy matter to collapse a lung, but it is quite perplexing to know just when to stop giving treatments. Furthermore, once a lung has been collapsed for a long period of time, it never again expands properly, even in the undiseased portions. However, pneumothorax undoubtedly prolongs many lives and helps to make them more comfortable while being treated.

Heliotherapy is now in the limelight for treating everything. In tuberculosis it has been hailed as a panacea by many; and just like many other agents, in a few years it will take its proper place in the few selected cases in which it is of value. There are some cases that heliotherapy undoubtedly will help, and others in which it will do harm; so that the best results can be obtained only by carefully selecting the cases, and more carefully administering the treatment. The dosage depends upon the patient. Blondes can stand less than brunettes. The good results from this treatment seem to be from tonic effect on the whole body, and is closely related to the vitamins. There are several theories as to just how it acts, and since it is still in its infancy, there is much more work to be done before anything absolute will be known.

Tuberculin is like the styles of 1912—a thing of the past. It, like so many other remedies for tuberculosis, held the stage for a while and then retreated to its proper corner. Its field of usefulness at present is chiefly in the laboratory for experimental purposes, and for diagnosis in doubtful cases of tuberculosis. A great deal of harm has been done by treating active tuberculosis with tuberculin, and many favorable cases have been rendered unfavorable with a few shots of this agent.

Spontaneous rupture of the lung with collapse fortunately does not occur very often. This is a very severe complication, and usually fatal. It generally occurs in advanced cases, and with the shock of collapse the already weak patient may die. In some cases the air may be drawn out, allowing the lung to reëxpand, but in practically all there is infection, and the pleural cavity soon fills with pus and must be drained.

Another interesting and useful phase of sanatorium treatment is that of diagnosis of difficult cases. The sanatorium provides a ward where close observation of a patient may be carried on until all the clinical and laboratory data can be collected and correlated. There are many cases of lung affections that are practically impossible to diagnose in the private home without incurring too great an expense. Among these are cases of tuberculosis, bronchiectasis, unresolved pneumonia, carcinoma, syphilis, lung abscess, and a few others. In these, the sanatorium aims to aid the physician by providing a place for the patient to go for a diagnosis.

After the diagnosis is made and a plan of treatment worked out with the referring physician, the case is disposed of at his discretion. The family physician does not lose the case just because he sends it to the sanatorium, but continues to have a share in it, and when ready to leave the sanatorium, the patient is placed entirely in his hands. Also, in cases needing treatment that we are unable to give, but which may be given by some other institution, the physician referring the case is first consulted before making any disposition of the patient.

ABSTRACT OF DISCUSSION

A. T. DAVIS, M.D. (Dover, Del): The last Legislature established Brandywine Sanatorium as a State institution, and within a few months we expect to have a thoroughly modern sanatorium. We recently received a contribution of $1,500 to purchase equipment. You are cordially invited to visit the institution.

WM. F. BONNER, M.D. (Wilmington, Del.): I believe sanatorium treatment to be the best for the patient, and in addition it keeps him away from quack remedies. I was recently called to see a patient who had had eight chiropractic "adjustments." We thought he would live perhaps a week, and he died in about that time.

Relation of Old Practitioners to Recent Graduates.—The following statement from the *Indiana State Medical Journal* is interesting. It naturally raises the query, "To what extent is this being done?" We cannot help but feel that it is negligible. That it even does occur is regrettable. "A young graduate of the Indiana University School of Medicine has come to us with a complaint that he and others recently from medical schools are obliged to enter into the worst form of commercial competition with some of the older practitioners in medicine or starve to death. He says that not only do some of the older men lower their fees when a recent medical graduate comes into the community, but they actually make personal bids for patronage from any and all patients who show the slightest tendency to patronize a newcomer. Fine teamwork! However, we will bet our money on the young graduate who is ethical and renders conscientious service."

Medical News

Deaths

ANNA M. WEST, wife of Dr. John W. West, Philadelphia; May 12.

AUSTIN M. GROVE, M.D., of York; Jefferson Medical College, 1902; aged 47; July 30, of nephritis.

JOHN EDWARD BUCHANAN, M.D., of West Alexander; Baltimore Medical College, 1905; aged 46; June 20, of myocarditis.

JOHN S. CRAWFORD, M.D., of Greensburg; Hahnemann Medical College and Hospital of Philadelphia, 1875; aged 74; July 24.

HARRY S. MCDANEL, M.D., of Highspire; College of Physicians and Surgeons, Baltimore, Md., 1883; aged 77; August 22.

MICAIAH R. EVANS, M.D., of Huntingdon; Jefferson Medical College, 1878; Civil War veteran; aged 84; July 24.

WILLIAM H. CORRIGAN, M.D., of Wilkes-Barre; Jefferson Medical College, 1893; aged 63; July 26, of pneumonia.

JAMES V. OTTO, M.D., of Port Allegany; University of Buffalo School of Medicine, Buffalo, N. Y., 1878; aged 71; July 15, of uremia.

JOHN O. JACKSON, M.D., of Corry; Homeopathic Hospital College, Cleveland, 1882; aged 71; in June, of cardiovascular and renal disease.

SAMUEL U. HARSHBERGER, M.D., of Port Matilda; University of Pennsylvania School of Medicine, 1882; aged 76; July 4, following an operation.

ALEXANDER C. WHITEHILL, M.D., of Brookville; Keokuk Medical College, College of Physicians and Surgeons, 1905; aged 55; July 4, of heart disease.

THEODORE J. ELTERICH, M.D., of Pittsburgh; University of Pittsburgh School of Medicine, 1889; professor of pediatrics in the same school; aged 60; July 26.

GEORGE P. MEECHAM, M.D., of Eldred; Queen's University Faculty of Medicine, Kingston, Ont., Canada, 1891; aged 67; July 5, of carcinoma of the liver and diabetes mellitus.

GEORGE Y. BOAL, M.D., of Freedom; Cincinnati College of Medicine and Surgery, 1870; aged 87; July 22, of arteriosclerosis and nephritis, at the home of his son, Dr. George F. Boal, Cooperstown.

JOHN J. SULLIVAN, SR., M.D., of Scranton; College of Physicians and Surgeons, Baltimore, Md., 1882; father of Drs. J. J. Sullivan, Jr., and C. J. Sullivan; aged 70; August 16, at the Mercy Hospital.

ARTHUR H. MCANULTY, M.D., of Nanty Glo; University of Pittsburgh School of Medicine, 1914; served during the World War; aged 42; July 19, at the Good Samaritan Hospital, Kearney, of angina pectoris.

RICHARD W. DEAVER, M.D., of Philadelphia; University of Pennsylvania School of Medicine, 1874; half brother of Drs. John B. and Harry C. Deaver; aged 79; August 13, in the Germantown Hospital, from the results of a fractured hip.

FRANCIS M. PERKINS, M.D., of Philadelphia, University of Pennsylvania School of Medicine, 1876; founder of the ophthalmic department of St. Mary's Hospital, Philadelphia, 35 years ago; was vice-president, president, and first life member of the Philadelphia County Medical Society; aged 76; August 6.

Births

TO DR. AND MRS. J. HAROLD AUSTIN, of Merion, a son, James Harold, Jr., August 18.

TO MR. AND MRS. GEORGE A. ARMISTEAD, of Philadelphia, a son, August 21. Mrs. Armistead is the daughter of Dr. and Mrs. Henry Tucker, of Philadelphia.

Marriages

MRS. CAROLINE KENDRICK to Dr. James W. Kennedy, both of Philadelphia, July 13, at Woodbury, N. J.

MISS MARY W. FARR, daughter of Dr. and Mrs. William W. Farr, of Philadelphia, to Mr. Paul Compton Kellock Domville, August 22.

MISS DONNA A. COUCH, of Grand View-on-Hudson. N. Y., to Dr. Richard A. Kern, of Philadelphia, August 19. Dr. and Mrs. Kern are spending their honeymoon in Europe.

Miscellaneous

DR. AND MRS. M. ROSS TAYLOR, of Wynnewood, are traveling in Europe and will return in the fall.

FRANKLIN L. RUTBERG, son of Dr. and Mrs. J. James Rutberg, of Philadelphia, sailed August 17 for a six-weeks' trip abroad.

THE MEDICAL WOMEN'S NATIONAL ASSOCIATION is compiling a history of pioneer medical women of the United States (allopaths).

DR. S. B. MEYERS, of Johnstown, has been spending the summer in Vienna, Austria, where he took post-graduate work in neuropsychiatry.

DR. AND MRS. GEORGE L. LAVERTY, of Harrisburg, sailed the latter part of August with the American Legion for a two-months' trip abroad.

MRS. J. C. PEACOCK, of Philadelphia, was recently elected president of the Philadelphia College of Pharmacy and Science Alumni Association.

DR. S. CALVIN SMITH, of Philadelphia, has returned from Europe. Mrs. Smith and Dr. Smith's niece, Miss Eliza Smith Steck, who are now in Paris, will return early in October.

THE ENGAGEMENT HAS BEEN ANNOUNCED of Miss Ellen Waln Harrison, of Villanova, and Mr. James K. Davis, son of Dr. and Mrs. Charles N. Davis, of Philadelphia.

DR. AND MRS. HOWARD K. WHITE, of Philadelphia, sailed on the *Berengaria*, August 31, to visit France, Italy, Switzerland, Germany, Belgium and England. They will return October 14.

DR. JOHN C. GALLAGHER, of Shenandoah, was recently removed to the Misericordia Hospital, Philadelphia, for observation and treatment. He is suffering from a complication of diseases.

DR. EDWARD B. HODGES, of Philadelphia, has been appointed surgeon in chief of the Chester County Hospital, West Chester, to fill the vacancy caused by the death of Dr. Edward Kerr, of Downingtown.

THE LATE DR. J. M. SPELLISSY, of Philadelphia, who left an estate of more than $10,000, provided in his will that his country house at Laurelton, N. J., be given to St. Edmond's Home for Crippled Children.

DR. AND MRS. C. B. LONGENECKER, of Philadelphia, have returned from a visit to the Pacific Coast, having visited also Glacier, Yosemite, Zion, Bryce, and Rocky Mountain National Parks, and the Grand Canyon of Arizona.

THE CHILDREN'S HEART HOSPITAL, Philadelphia, has purchased an additional tract of land for $40,000. The first wing of the hospital will cost approximately $125,000. The completed structure will cost about $600,000 and will contain more than 400 beds.

THE NEW ANNEX of the State Hospital at Coaldale will be formally opened September 12. It is two stories high, with a dozen private rooms, two large wards for public work, and a kitchen. The new annex will have a capacity of more than one hundred patients.

DR. ELDRIDGE L. ELIASON, of Philadelphia, was severely injured on the night of August 17 when the automobile he was driving collided with another car. He has made an uninterrupted recovery.

DR. P. J. CARRERAS, chief physician of the gynecological and maternity clinics at St. Mary's Hospital, Philadelphia, recently sailed for his native island, Porto Rico. He will spend several months there and in Cuba, paying special attention to investigation of malarial fevers and other tropical diseases.

DR. NEVA R. DEARDORFF has been appointed director of the newly established Research Bureau of the Welfare Council of New York. Dr. Deardorff was formerly chief executive of the Children's Commission of Pennsylvania. She is president of the American Association of Social Workers and of the Child Welfare League of America.

WEBSTER S. KOHLHAAS has been appointed superintendent of the Harrisburg Hospital, succeeding Frank E. Brooke, resigned, and Miss Katharine G. Naughton has been reappointed assistant superintendent. Mr. Kohlhaas was comptroller and purchasing agent of the Harrisburg Hospital at the time of his appointment to the higher position.

THE PHILADELPHIA HEALTH COUNCIL and Tuberculosis Committee engaged Mrs. Kate Kohlsaat, of Manchester, N. H., to become industrial secretary on September 1st. She has charge of the council's medical service in industrial plants, gives health instruction to women workers, conducts first-aid classes, and supervises the nursing service of the committee.

EXAMINATIONS OF CANDIDATES for entrance into the Regular Corps of the U. S. Public Health Service will be held at the following-named places on November 7, 1927: Washington, D. C., Chicago, Ill., New Orleans, La., and San Francisco, Calif. Requests for information or permission to take this examination should be addressed to the Surgeon General, U. S. Public Health Service, Washington, D. C.

WORK HAS BEEN STARTED on the University of Pennsylvania's laboratory of anatomy and biochemistry, which will cost approximately $1,000,000. The cost is being covered by gifts of $250,000 each by the Rockefeller Foundation and the General Education Board, made on condition that the University raise a similar amount. This condition was met by the University and plans were immediately drawn for the new building.

IN MEMORY OF HIS late father, Horace G. Hano, an executive of Oppenheim, Collins and Company, Philadelphia, Lester Hano, now in Paris, sent a check which provided an entertainment and party recently for about 2,000 patients of the Philadelphia General Hospital at Byberry, and enough money remained to provide a series of eight afternoon concerts for the same patients during the months of August and September.

THE FOLLOWING ARE the members of the recently reorganized State Board of Medical Education and Licensure: Secretary of Health, Dr. Theodore B. Appel, *ex-officio;* Superintendent of Public Instruction, Dr. John A. H. Keith, *ex-officio;* Dr. Irvin D. Metzger, president of the Board, Pittsburgh; Dr. Adolph Koenig, Pittsburgh; Dr. William M. Hillegas, Philadelphia; Dr. Merle V. Hazen, Harrisburg; and Dr. Edgar M. Green, Easton.

FRANK G. ZIMMERMAN, widely known theatrical man, who ended his life on July 12th, left an estate of $675,000. After making a bequest of $5,000 to Mary E. Sonntag, his will stipulates that the residuary estate be held in trust for his widow, and provides that when she dies the principal is to go to the University of Pennsylvania. Three-fourths of it is to be used for hospital purposes, and the remaining fourth for general purposes.

A PETITION IS IN circulation in Norristown asking the County Commissioners to have the question of a tuberculosis hospital submitted to the voters of Montgomery County at the next election. If the commissioners heed the request, it will be the second time that the voters have passed on the question. It was voted upon favorably several years ago, and the court appointed a committee of citizens to take charge of its establishment and other arrangements were made as to a site when a snag was struck by opposition of the county comptroller and the county commissioners, and the plan subsequently was thrown out by the courts.

A COMPLETE AND MODERN nurses' home was recently dedicated at the Robert Packer Hospital, Sayre. The dedication exercises were held in connection with the annual commencement of the Training School and were largely attended. The addresses for commencement and for the dedication exercises were given by Mrs. E. S. H. McCauley, Secretary of Welfare of Pennsylvania, and Dr. Wilmer Krusen, Director of Public Health, Philadelphia. The Nurses' Home was given to the hospital through the generosity of the public who subscribed liberally toward it. The cost of the building with furnishings was approximately $340,000.

THE DIVISION ON Prevention of Delinquency of the National Committee for Mental Hygiene has been reorganized, with Dr. George S. Stevenson as director and Miss Clara A. Bassett as consultant in psychiatric social work. The program of the new Division on Community Clinics involves termination of the child-guidance demonstrations carried on as a major function of the Division during the past five years, but the Division will continue a consulting relationship with the clinics that have been established as a result of these demonstrations. The aim will be to foster the interest that has been aroused by the demonstration clinics and to maintain sound standards of work and training in the field of child guidance in general.

THE CITY OF PHILADELPHIA has started upon the most comprehensive program for hospitalization of policemen, firemen, and their families ever attempted in this country. Under a plan conceived by Dr. Hubley R. Owen, chief surgeon of the Department of Public Safety, the wives and children of the men also will be assured of adequate medical attention and surgical treatment from the greatest experts in Philadelphia. The project was made possible by a welfare fund started by members of the Bureaus of Police and Fire on July 15th, with the men voluntarily contributing $1 a month for a year toward the consummation of the program. The ultimate development of Dr. Owen's plan will be a proposal to provide a hospital in Philadelphia solely for the use of policemen, firemen, and their dependents.

THE FIRST INTERNATIONAL CONGRESS of Mental Hygiene will be held in Washington, D. C., in April, 1929. This decision was reached at a meeting of the Organizing Committee held in Paris on June 3d, which was attended by delegates from fourteen countries. It was also decided that the International Committee for Mental Hygiene, now in process of formation, should be formally founded at one of the sessions of the Congress, and that Mr. Clifford W. Beers, who has been in charge of the work of the organizing committee, be appointed permanent secretary-general of the International Committee when it is established. Its secretariat, it is agreed, will be located in the United States. This will enable Mr. Beers to continue as Secretary of the National Committee for Mental Hygiene, which has its headquarters in New York City.

TWENTY ORGANIZATIONS concerned with the care of the blind and the prevention of blindness recently pooled their resources in an educational exhibition of work for and by the blind residents of New York State—the first of its kind. This exhibit was assembled by the New York State Commission for the Blind, and was on display at the Art Center, 65 East 56th Street. The exhibition, which covered practically the entire

ground floor of the Art Center, showed the tremendous handicaps under which the blind labor, the extent to which blind persons, from childhood on to old age, have succeeded in overcoming these handicaps in order to secure an education, or to become at least partially self-supporting, and finally the exhibit of the National Committee for the Prevention of Blindness showed the extent to which these handicaps may be altogether avoided.

THE NATIONAL COMMITTEE for Mental Hygiene ended its Child Guidance Demonstration Clinic in Philadelphia on July 1st with the organization of the permanent clinic established there as a result of the demonstration. The staff consists of Frederick H. Allen, M.D., director; Harold F. Corson, M.D., psychiatrist; Phyllis Blanchard, Ph.D., psychologist; Malcolm J. Nicholson, part-time psychologist; Almena Dawley, chief of social service; Jean F. Morton, executive secretary; and seven social case workers. The aims and functions of the clinic will be fourfold: (1) to help all social and educational agencies in the community in the study and treatment of behavior disorders; (2) to undertake the study and treatment of a limited number of problem children referred by anxious parents; (3) to serve as a community educational center for the development of a better understanding of the problem child in the home, the school, and the court; (4) to devote as much time as possible to intensive research and study.

THE AMERICAN COLLEGE OF SURGEONS will hold the seventeenth Clinical Congress in Detroit, October 3d-7th. Headquarters will be at the Book-Cadillac and Statler Hotels, and the meetings will be held at the Statler Hotel and Orchestra Hall. The Hospital Standardization Conference will extend from Monday morning to Thursday afternoon and will include a discussion of hospital and nursing problems and hospital demonstrations. Monday evening's program will include an address of welcome by the local chairman, the address of the retiring president, the inaugural address of the new president, and the John B. Murphy oration. Clinics in general surgery will be held in the Detroit hospitals each morning from Tuesday to Friday, and in eye, ear, nose, and throat work the same afternoons. Clinics will also be held at University Hospital, Ann Arbor, Tuesday to Thursday. On Tuesday and Wednesday mornings and afternoons, and on Thursday morning, clinical demonstrations will be held at the Statler Hotel (mornings) and Orchestra Hall (afternoons). On Thursday afternoon the annual meeting of the Governors and Fellows will be followed by a cancer symposium. On Friday afternoon there will be a symposium on traumatic surgery, to be participated in by leaders in industry, labor, indemnity organizations, and the medical profession. On Tuesday evening the program will take the form of a celebration of the Lister Centennial. On Thursday evening there will be a large Community Health Meeting in the Masonic Temple, and on Friday evening the annual convocation of the College. Other outstanding features will be the exhibits. In addition to the commercial exhibits there will be a replica of the Lister exhibit at the Wellcome Museum of Natural History, London, including Lister's operating rooms and hospital wards. The departments of Hospital Activities, of Literary Research, and of Clinical Research of the College will also present exhibits. The retiring president is W. W. Chipman, Montreal, and the president to be inaugurated, George David Stewart, New York. The Lister oration will be delivered by W. W. Keen, Philadelphia.

BOOK REVIEWS

1926 COLLECTED PAPERS OF THE MAYO CLINIC AND THE MAYO FOUNDATION, Rochester, Minnesota. Octavo of 1329 pages, with 386 illustrations. Philadelphia and London: W. B. Saunders Company, 1927. Cloth, $13.00 net.

This is the eighteenth volume of the annual publication of the papers from the Mayo Clinic. The frontispiece is a photograph of the late Russel D. Carman, which is followed by a memorial sketch of that great physician, whose loss must be shared by the profession at large as well as by the Mayo Clinic.

During the year practically every subject of general interest is considered by some member of the staff. More than five hundred articles were published during 1926. Only papers of general interest are published in full, those of more restricted application appearing either in abridged form, or by title only. This volume certainly maintains the high standard set by previous *Collected Papers,* and is worthy of a place on the shelves of all medical libraries, private and otherwise.

SURGICAL APPLIED ANATOMY. By Sir Frederick Treves, Bart. Eighth edition, revised by C. C. Choyce, M.D., F.R.C.S. (Eng.), Professor of Surgery, University of London. Cloth. Pp. 727, with 162 illustrations. Price, $4. Philadelphia: Lea & Febiger, 1927.

This small but meaty volume is a new edition of an old classic, first presented in 1883, and accordingly needs no introduction to student or practitioner. The name of the author has always been one to conjure with, and the present edition loses nothing of prestige because of the annotations and additions of Dr. Choyce. It is a very readable book, and contains much clinical diagnosis and treatment deftly woven into what conceivably could be a rather dry subject. The surgical dangers and pitfalls are particularly pointed out.

The work divides the body into six regions, and each is amply covered. It is fully up-to-date, and exhibits sound, critical surgical judgment, tersely worded, as evidenced by the three-line reference to Costain's lymphaticostomy for peritonitis. The work is comprehensive, and includes ophthalmology, otology, rhinology, gynecology, urology, orthopedics, and neurosurgery, as well as the usual general surgery.

The type is legible, and the illustrations (66 in color) are helpful, and for the most part are surgical rather than merely anatomic, representing again the intense practicality for which the English school is so justly noted. This is the kind of book that every man who operates wants to refer to once in a while.

THE CLINICAL INTERPRETATION OF BLOOD CHEMISTRY. By Robert A. Kilduffe, A.B., A.M., M.D. Philadelphia: Lea and Febiger, 1927. Price, $2.50.

Now that blood chemistry has become a routine in everyday practice, it behooves the general practitioner to familiarize himself with the interpretation of the various tests. The book before us is to meet this need. In a small volume of 180 pages, the author presents brief interpretations of several of the more important tests as they are applied to clinical medicine, such as nonprotein nitrogen, blood-urea nitrogen, uric acid, creatinin, cholesterol, blood-sugar, calcium, chlorids, phosphorus, ammonia, proteins, and a few miscellaneous tests. For some reason, the bile pigments in the blood are not even mentioned, notwithstanding that the van den Bergh test is quite popular.

We agree fully with the author's statement that "blood chemical determinations are not *diagnostic* tests; they do not and cannot furnish the clinician with the name of the disease responsible for the symptomatology." It is also well to emphasize that the P. E. (probable error) in blood chemistry is considerable, and a single determination, particularly without controlled factors, may be misleading.

The author includes a number of interesting tables, showing the normal and pathologic limits of the chemical constituents of the blood. Several chapters devoted to the dietetic management of metabolic conditions, with tables and diet lists, and a discussion of the insulin treatment, are very helpful for ready conference.

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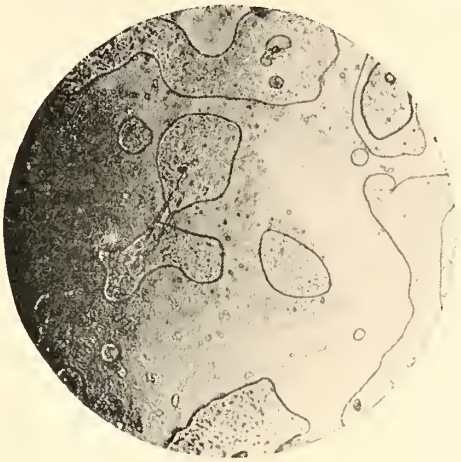
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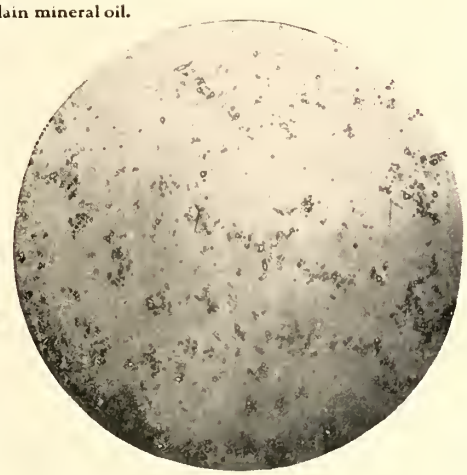
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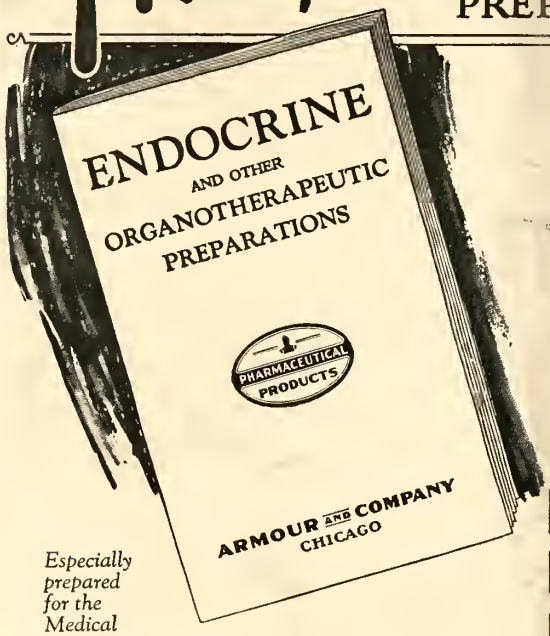
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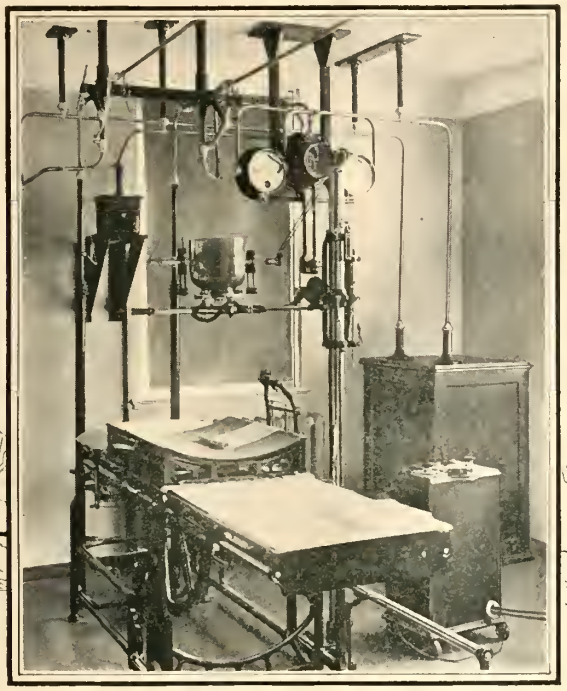
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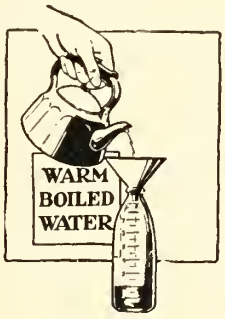
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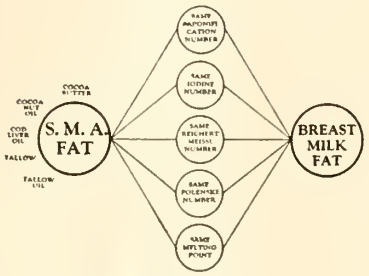
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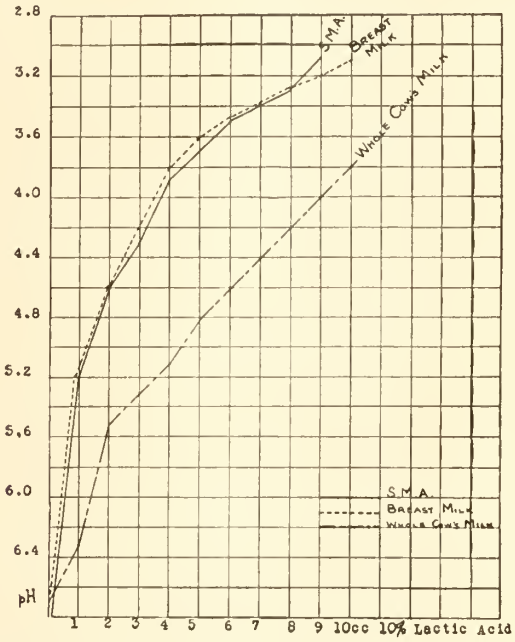
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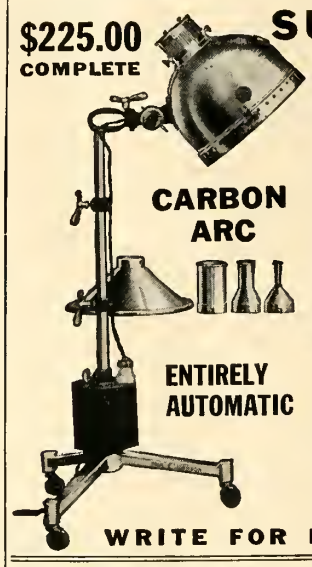
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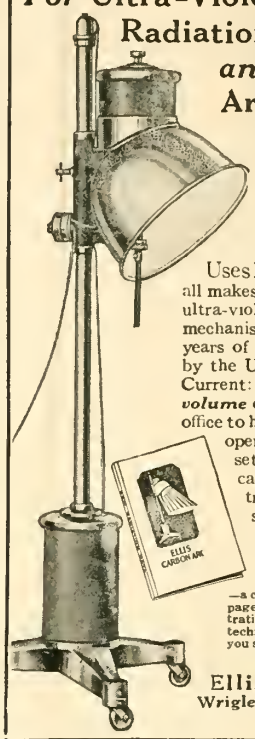
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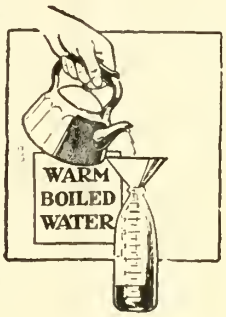


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